THE CHEMIST AND DRUGGIST

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Editorial Notes.

THE *Pharmaceutical Journal* of last week makes the important announcement, that "the Council, perceiving the opinion entertained by members of the Society to be so decidedly antagonistic to the application of compulsory regulations," will, therefore, suggest their issue simply as recommendations. This, it seems, was the substance of a resolution proposed by Mr. Dymond, and carried almost unanimously, Mr. Sandford, the President, alone dissenting. Mr. Sutton had proposed that the sense of the members of the Society should be taken on the question at issue, and the resolution carried with such extraordinary unanimity was an amendment to that motion.

The leading article conveying this information is one of the most curious specimens of official-journalistic composition which has ever been presented. Can any one imagine the editor of the *London Gazette* bursting out into a jubilant rhapsody over the defeat of some important Government measure? We have here the exact analogue of such an astounding event. The editor manifests such a buoyancy and joy in narrating this "last step in poison regulation," as to compel us to liken him to a passenger on board the ship in which Jonah sailed, uttering exclamations of delight when he learned that the captain and officers had resolved to cast overboard the dangerous part of their cargo. The first paragraph of the article discloses the secrets of his prison-house so graphically, and indicates the unapproachable majesty of the Council so vividly, that we quote it entire:—

> "Between the Scylla and Charybdis of displeasing the governing body of our Society and of becoming obnoxious to the reproach that we do not purvey information with such promptitude as befits this age of progress, we are irresistibly impelled to commit what may be deemed a breach of the regulations with which we ought to comply. But as the occasion is one that we may fairly term exceptional, we trust that the balance of opinion will be in favour of our disobedience,—since the majority of our members, as well as the great body of the trade, must be anxious to hear of anything taking place in reference to a question that interests them so profoundly as that of poison regulations."

Ordinary readers might have supposed that a journal dated April 8th might have published intelligence of an event which happened on April 5th, without such an apologetic deprecation of the anticipated consequences of "a breach of the regulations with which we ought to comply." Is there so much anger in celestial minds?

We pass by the form of the communication, however, and come to another point which must occur to many other minds on reading this article. After stating what had taken place at the Council-meeting, the writer says: "We may, at least, congratulate our readers that the question which has for months agitated our Society and the entire trade is thus finally disposed of." If that is so, what becomes of the threat so continuously paraded before the opponents of compulsory regulations, that if not agreed to by the chemists and druggists themselves, they would be forced upon them in a far more obnoxious manner by the Government? Has the Council taken care to gag the public press, which, we have been told, was so excited and determined on this matter? Has it provided for the perfect acquiescence of the Privy Council and Mr. Simon? The lion might be willing to lie down with the lamb, so long as the lamb was perfectly obedient; but what will the lion do now that the lamb has openly declared rebellion? The fact is, the Council has dilly-dallied with this question so long, and such efforts have been made to turn it into a public question, that it will only be by good luck that Government interference will now be avoided. With this prospect in view, there may be some of the more revengeful of the Council's conquerors who will not so readily endorse the pacific assurance of the next sentence, which, under the circumstances, might at least have been put into the form of a petition, that "there is no longer any ground for hostility."

The share that we have taken in the contest with the Council is known to the whole trade. We saw no reason or hostility because a majority of the members of that Council held opinions favourable to the enactment of compulsory poison regulations, and advocated these opinions like men and gentlemen. But in the interests of nearly ten thousand chemists and druggists of Great Britain we did esteem it our duty to oppose them, when we saw that they had resolved either to force these men to subscribe to their Society or to exclude them from any voice in the management of a department of their own affairs. As far as we can judge, this spirit is still dominant. The will reigns, if fortunately the power is absent. To that spirit we still declare "hostility," and hope the more liberal and far-seeing members of the Pharmaceutical Society will join us in denouncing such a perennial source of discord.

On the part of one other class it may prove that all ground for hostility has not yet been removed. We refer to those who have voted *for* the compulsory regulations. As a matter of fact, these form but a very fractional part of the whole body, as we shall show immediately; but the Council has had no means of knowing this officially. In fact, Mr. Dymond, who was the author of the resolution, was himself at a meeting of the Birmingham trade where a majority of eight to four was recorded *in favour of* the enactment of the regulations. If, however, the Council does admit that the opinions of those whom it represents are entitled to consideration, why was it voted that a canvass was unnecessary? We did admire the heroism of the representatives who had resolved to fight their constituents on this question to the last ditch and the last biscuit, but we have now not even that left to admire.

The votes which we have received on this subject, in reply to the circular which we sent out, may fairly be taken to represent the general sentiment of the trade. Up to the time when the Council had passed this resolution we had received 5,040 votes against the regulations, and 391 for them. A large number were good enough to comply with our request that they would return the paper filled up, even if neutral, but many chemists whom we must presume to be neutral have not returned these to us. No less than 1,438 came back to us, through the post, marked "gone away," "deceased," "not known," or with some other endorsement indicating that the entry in the Register was incorrect. This extraordinary proportion is worthy of the early attention of the Registrar, to whose notice we commend it.

In June last we published a statement respecting an antidote to snake-poisoning which we extracted from the *European Mail*, where it first appeared, signed by S. B. Higgins, State of Magdalena. The antidote was simply to take a small dose of a very dilute tincture of the gall of the same variety of snake from which the poison has emanated. This treatment, Mr. Higgins stated, he had never known to fail in a single instance during the past three years in different districts in his country in which he had been able to induce its adoption. This assertion was a very promising one to homœopathists, but we have now to publish a letter from India, which seems conclusive evidence against the infallibility of Mr. Higgins's newly discovered cure. Mr. Vincent Richards, M.R.C.S., Civil Medical Officer of Bancoorah, Bengal, writes to us as follows:—

> "A letter, superscribed 'Snake-Poison and its Antidote,' re-published in your columns from the *European Mail*, was recently brought to my notice. Mr. Higgins, the writer of the letter, remarks, that after twenty years' observance of the 'peculiarities, etc., of poisonous snakes' he is able to announce the law in therapeutics, that 'all animal poisons have their specific antidotes in the gall of the animal or reptile in which these poisons exist.' I am sorry to say my experience does not confirm his statement. I have tried this 'specific antidote' lauded by him, and unhesitatingly pronounce it to be absolutely useless, like many other of the 'infallible remedies,' *e.g.* ammonia, Tanjore pill, liq. potassæ, etc.
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> "Australians and Americans have been particularly fortunate in discovering 'specific antidotes' or 'infallible remedies' for snake-bite; but it is a remarkable fact that whenever these 'antidotes' have been submitted to the test in India, with Indian snakes, they have invariably been found useless. This is my own experience and that of the greatest authority on the subject in India, Dr. Fayrer, C.S.I., Professor of the Calcutta Medical College.
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> "Mr. Higgins, it appears, has been particularly fortunate, for he has not only discovered a 'specific antidote,' but a prophylactic. His law in therapeutics, however good it may hold in America, in India is no more true than the generally-received opinion that absorption of snake-poison does not take place through mucous membranes.
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> "I would refer those interested in the matter, who doubt the absorption of snake-poison through mucous membranes, to Dr. Fayrer's excellent 'Summary of Experiments on the Influence of Snake-Poison,' published in the *Indian Medical Gazette*, of February, 1871, and my own humble experiments (Page 128, 'Indian Annals of Medical Sciences,' Dec., 1870).
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> "All credit is due of course to Mr. Higgins for his humane endeavours, but he has pronounced a theory which you refer to as throwing 'an important new light on the therapeutics of animal poisons,' calculated to mislead if unchallenged. I have therefore taken the liberty of expressing my opinion on the subject."

The above is dated February 22nd 1871, and by the same mail we have another note from Mr. Richards, dated February 25th in which he says,

> "Since writing my last letter, Dr. Fayrer has informed me that he has also tried the gall *antidote*, and found it useless. The additional evidence of such an authority will, I believe, convince you of the absurdity of Mr. Higgins's theory."

The discovery of an antidote to snake-poisoning of real efficacy would be an enormous boon to India. The sacrifice of life occasioned by snake-bites is very great, and physicians are powerless in the presence of it. Dr. Fayrer, referred to by Mr. Richards, has just completed a most important series of papers in the *Indian Medical Gazette*, describing exhaustive investigations on this subject, which he has conducted during the last three years. These experiments yield some interesting facts. Dr. Fayrer considers that in point of relative deadliness, the cobra, ophrophagus, and dabora are nearly on a par. As far as his experiments go, he has found that venomous snakes are not poisonous to one another, although the less are probably affected by the more poisonous kinds. They are susceptible to other poisons, however, such as strychnia and carbolic acid. The bodies of animals poisoned by snakes are eaten with impunity by men and animals. But the blood of an animal dead from snake-poison is itself poisonous; if injected into another animal it destroys life. The Indian Government, with a just regard to the importance of the subject, has accorded special thanks to Dr. Fayrer for his labours in this respect. And that the investigations were not quite free from danger is evident from the narrative. In two cases there was cause for anxiety. In the first, a small quantity of cobra-poison was projected into the eye. Snake-poison, be it remembered, is capable of being absorbed through delicate membranes, as Dr. Fayrer's experiments have fully confirmed. Immediate ablution and avoidance of rubbing of the eye removed the poison. In the second case the principal snake-man was bitten by an echis in the thumb; immediate excision and cauterization of the part had recourse to, and no evil results followed.

We have been favoured with nearly two hundred letters on the Poisons Regulations. About 90 per cent. of these are strongly opposed to their enactment, and among those who wrote in favour of compulsory legislation, many qualified their approval by condemning the partiality which would be the result, unless the Privy Council could be induced to extend the regulations to surgeries as well as shops. We had planned to publish a proportion of these letters, to represent as fairly as possible the views of all. This would now be a work of supererogation. The Council has surrendered, confessedly to the power of the provinces, and it is extremely likely that no further attempt will be made by any one to impose "poisons regulations" on any portion of the dispensers of medicines. If the Privy Council should not be satisfied with the issue of the regulations merely as "recommendations," they must run the gauntlet of Parliament. The House of Commons will undoubtedly include medical practitioners in the scope of any Act which it may pass; and this will take the chief part of the sting out of the enactment, as well as promise more protection to the public, which of course is the only aim Mr. Simon has in view.

A great many of our correspondents, taking the Poisons Regulations as their centre, radiate into a wide circumference of other questions. We quite agree with them that it is time for very serious attention to be directed to several matters which have been left to the consideration of the Pharmaceutical Council, and we shall not unnaturally test the earnestness and liberality of the new Council by the manner in which they deal with these questions. First of all, it is a matter of some moment that the Council meetings should no longer be held with closed doors. Right or wrong, thousands of the chemists of the country have the impression that the chief aim of the Council is to plot against the interests of those less favoured in the way of business, especially if they be not members of the Society. We shall return to this subject; meanwhile, we ask pharmaceutical chemists who agree with us to remember this point when they give their votes for the new Council. Let them not be in a hurry to vote. We believe that all this periodic misunderstanding would be avoided if the Council would throw away its antediluvian notions of respectability, and not merely permit, but invite the attendance of reporters to their meetings.

We have come to the conclusion too, that it is now time for a really earnest effort to be made to carry the provisions of the Pharmacy Act, 1868, into operation, and to make it respected by the unqualified dealers in deadly poisons. We have read with some surprise communications from every part of the country describing the systematic violation of the Act by grocers, oilmen, ironmongers, and others. The revelations made by Mr. Bland at the last evening meeting of the Society were rather astonishing to some of the chemists present. He showed carelessly screwed-up parcels of the most deadly poisons without labels or precautions of any kind, which are to be obtained in that dangerously careless manner any day in London. The Act must either be prosecuted on a scale of thoroughness, or we must agree to let it become a dead-letter. In the interests of the public as well as of chemists and druggists, we shall agitate for the first course.

We publish a remarkably interesting and complete account of the pharmacy of North Germany. The article has been written for us by a German pharmacist, who is not only well acquainted with his own profession, but who writes with singular clearness, and with an almost idiomatic accuracy in a foreign language. We have the pleasure to anticipate from the same pen further contributions for our pages.

At a recent meeting of the Liverpool Literary and Philosophical Society, Mr. T. J. Hutchinson, F.R.G.S., etc., British Consul at Callao, read an interesting paper on "Our Meat Supply from Abroad," treating exclusively on the preservation of meat in South America. Mr. Hutchinson declared that in his belief, the problem has been solved by the bisulphite of lime process patented by Messrs. William Bailey and Son, of Wolverhampton. He detailed many remarkable experiments and quoted opinions from eminent authorities who had themselves tested meat thus preserved. Mr. Hutchinson stated that a carcass of an ordinary bullock, is purchasable in South America at from £2 to £2 10s.; that the hide is worth nearly £1; that 400 lbs. of meat remain, the whole of which can be preserved by this process for less than a shilling; and finally, that it can be brought to England and sold at from 4d. to 5d. per pound, allowing a handsome profit, and presenting the appearance and flavour of sound, fresh beef, perfectly free from any taste of chemicals.

Among our reviews will be found a notice of an important medical work, the publication of which has just been commenced. The author is Mr. Alfred Haviland, the lecturer on the geography of disease in England and Wales at St. Thomas's Hospital. His plan is to issue a series of maps exhibiting by varieties of colour, the relative degrees of the fatality of different diseases in the respective districts, following of course the statistics of the Registrar-General's Reports, or we should rather say the average of these for ten years. We make this prominent allusion to our review because the work appears to us of public service, and is at the same time of such a peculiar character as to offer but slight prospect of immediate remuneration to its author. It therefore becomes a duty on the part of the press to give such publicity to the announcement of the publication as may be possible.

The provisions of Mr. Muntz's Adulteration Bill, if carried through Parliament, and afterwards carried into effect, will very seriously and unfairly affect the business of a retail chemist and druggist. We can hardly think that the promoters of the bill have deliberately planned such an unjust arrangement of the penalties as they here propose. We have no wish to see any protection afforded to those who may be paradoxically described as *bonâ fide* adulterators; but we hope and believe that the House of Commons will not sanction in its fulness an Act which, as far as vendors of drugs are concerned, would make the innocent suffer in a proportional degree as severely as the truly guilty. The bill provides that the seller of adulterated food or drink may not be convicted unless it shall be shown that he is himself aware of the adulteration. But it would make the sale of an adulterated medicine punishable by a fine not exceeding £20; and for a second offence, besides the fine, it is at the option of the magistrates to order that the name, address, and offence of the dealer shall be published. This bill has passed the second reading in the House of Commons. We shall take care to call the attention of certain members of Parliament to what we think can only be an oversight, in the hope that it will be corrected in committee. Should it be sent to the House of Lords, however, with this obnoxious clause, we would suggest that it would then become a duty for the Council of the Pharmaceutical Society to use every endeavour to obtain a fairer adjustment of its penalizing provisions.

The *Scientific American*, in a recent issue, gives us particulars of a new system of treatment of various diseases now obtaining some degree of popularity in the United States, in consequence of the enthusiastic advocacy of persons who have been benefited by it. It is known as "The Lifting Cure," which, as its name implies, is a lifting exercise, very light at first, if the patient be much debilitated, and very gradually increased with the improvement in health and strength of the patient. The great point seems to be to secure longitudinal pressure upon the spinal column without shock. The apparatus employed is therefore so constructed as to prevent the weight being lifted all at once, the full exertion being only applied at the end of the lift, and the power exerted being gradually increased from the first beginning of the effort till the weight is raised, when the effort is sustained uniformly for a few seconds, in holding the weight suspended, and then gradually diminished to the end. The patient then rests for a short time, alternately lifting and resting until the exercise is completed. Thus, neither shock nor sudden strain is possible, no matter how great the exertion may be. Our contemporary describes several rival machines which have been introduced to meet this new demand. They appear to be very elaborate constructions, combining levers, fulcrums, and elliptic springs in a most ingenious manner. We could hardly advise the ingenious inventors to export a stock to Europe, for assuredly slow as we are, we should have time to reflect while they were crossing the Atlantic, that patients who would submit to this kind of torture, might just as well try a more sensible and cheaper form of exercise which, if less mysterious in its action, is quite as likely to produce the "sedative" effects which are supposed to result so miraculously from the treatment advised by the disciples of this new school.

We have reprinted in another column, under the title of "A Botanical Student's Dream," a literary gem contributed by Mr. William Southall, of Birmingham, to the *Pharmaceutical Journal.* Mr. Southall has also called attention to the existent want of a work on pharmaceutical botany which shall first arouse an interest in the student's mind in the science which he is called upon to master, and at the same time give him such an intelligent insight into its real character as to convince him that it is a science, and not a mere arbitrary collection of ugly names for lovely things. A work written *by* a pharmacist *for* pharmacists is Mr. Southall's suggestion. If one of the skilled botanists among us will come forward to do this work, he will confer a benefit on every generation of pharmaceutical students yet to come.

Forsaken by an unnatural parent, weak and helpless, and attacked by a ruthless assassin, the "Drug Market Notes" of the *Pharmaceutical Journal* have perished. It was a happy release, for the poor infant could never have been reared in the ungenial atmosphere of Bloomsbury. Its pretty innocent prattle of commercial matters amused its friends in the City, who, however, too clearly foresaw its early grave. Some natural tears they dropped but wiped them soon, and seeing that even decent burial was denied to the poor child by its own relations, they have asked us to pay this last tribute to its memory.

Mr. Sandford's resignation of the presidency of the Pharmaceutical Society has occurred under circumstances which place him in the curious position of appearing as the sole advocate of despotic power. It is not necessary that we should come to the rescue. Mr. Sandford has won a high and honourable position in the trade, and he has no reason to fear that his past services will be forgotten now that a question has arisen which has compelled a separation between himself and those for whose interests he has devoted much labour and time. Those who for the moment are in political opposition to him, no less than his supporters, will know how to respect the firmness with which he has adhered to a course which he holds to be the most desirable for the benefit of the whole trade.

We are truly sorry to announce that the prize offered by us for the best design for a chemist's shop window has not resulted satisfactorily. Five drawings were sent in under the mottoes, "Try Again," "Ostendo non ostento," "Nil Admirari," "Smith," and "Brown." We submitted these to competent gentlemen, who declined to award the prize to either of the competitors. We should not have done ourselves any credit by engraving either of the designs before us.

We offer two guineas for the best paper on any pharmaceutical subject which shall reach us before June 10th. The points we shall look for and judge by will be, first, the originality and value of the results, and secondly the terseness and clearness of the description. We hope this will induce some valuable laboratory experiments to be brought forward. The papers will be judged by gentlemen of ability and experience, and if we think it desirable to print more than the prize essay, we shall pay the author for his work.

Forty-five gentlemen have been nominated to fill the fourteen vacant spaces in the Pharmaceutical Council, the election to take place on May 17. In our next we shall have something to say respecting the claims of those out of the forty-five who decide to run for the honour.

The guardians of the Worksop Union have accepted Messrs. Jones and Son's tender for the supply of drugs, etc.

THE COUNCIL AND THE TRADE.

We have been slow to believe and careful to avoid the expression of any remarks which might convey the impression that in its recent course of action the Council of the Pharmaceutical Society had committed anything more reprehensible than an error of judgment. We have so much respect for many of the members of that Council personally that we could hardly imagine them capable of exhibiting in a collective capacity such an utter contempt for the majority of their fellow-tradesmen as the course pursued by them with regard to the Poisons Regulations, would seem to indicate. We presume, however, that the leading articles of the *Pharmaceutical Journal* may be considered to represent the views of the Council. If so, we may now take it for granted that it was undoubtedly the deliberate intention of that Council to use to the utmost extremity the power entrusted to it by law, first of all to ignore, and then, if they could obtain the sanction of their own constituents, to vex and enrage the majority of British chemists and druggists, by the enactment of regulations which they *expected* would be distasteful. We say that this course appears to have been the deliberate intention of the Council. Well might they refuse to reporters admission to their meetings. We do not rely merely on guess or hearsay. Deeds and words correspond. At the January Council meeting Mr. Woolley proposed, and Mr. Brown seconded, a motion, to the effect that an official poll of the whole trade should be taken. All the Councillors present voted against that motion except the Manchester representatives themselves. There was not a single voice raised, as far as we can tell, for sending the "statement of reasons" to other than pharmaceutical chemists. It is in view of this discourteous treatment of the trade by the Council that we have joined in the contest, and we have noticed that the *Pharmaceutical Journal,* which ought not to be a mere commercial speculation, has persistently avoided this issue, or when that was no longer possible, has disposed of it in a few such cool sentences as these. "Much of the argument we have heard is superfluous. . . . . We cannot attach much weight to the complaint that a large portion of the trade may be legislated for, and subjected to compulsory regulations, by a body consisting only of a much smaller number." Perhaps Messrs. Flux and Argles will explain to this advocate of despotism a few of the principles of the British Constitution. Outside the charmed circle of official pharmacy possibly he would attach some weight to the complaint of the enforcement of compulsory regulations "by a body consisting only of a much smaller number."

Nothing, however, shows the situation more distinctly than an article in the issue of that journal for March 18th, entitled "Business." This would have been worthy of some comment under any circumstances, as it is unusual to meet with anything approaching the comic in the pages of our sedate contemporary, while its remarks under the heading we have named might be expected to give us some refreshing and novel ideas. We are not insensible to a good joke, and we have no intention to quarrel with the good-humoured banter which was levelled against ourselves in the article to which we have referred. In this age of competition it is perhaps fair, though it is not exactly noble, to attribute mercenary motives to the actions of an opponent. The writer on "Business" seems to have arrived at the conclusion that the proprietors of the Chemist and Druggist, in printing and circulating thirteen thousand non-official voting papers, had been actuated by the hope that in the end the transaction would prove profitable. In order to expose this infamy effectually, our humorous friend coupled us with a certain advertising swindle, and described both as affording illustrations of modern business, so near to, if not outside, the limits of legitimacy as to possess at least a certain degree of shadiness. Of course this was only his fun, and to allay any anxiety which this reckless style of writing may have aroused at Bloomsbury, we may assure the authorities there that our solicitors shall be instructed to compromise the affair on terms most favourable for them. The only word of criticism which we would offer on this article we give in a spirit which is not mercenary. Certain phrases which occurred in it, perhaps thoughtlessly written, which, while they in no degree added to its wit, bordered so near to, if they were not outside, the limits of that respect for higher subjects which is usually observed even by comic writers, that in the view of some perhaps morbidly scrupulous readers they detracted considerably from the otherwise brilliant literary merits of the article. Our censor, however, having himself woven the bag for our cat, was, of course, at liberty to amuse himself by letting her out, and we are perfectly willing to suffer the obloquy of the exposure. Indeed, we will plead guilty to the indictment that we endeavoured in this matter to serve the trade, in the hope and belief that the trade would recognise and appreciate our efforts. How necessary it was that some one should undertake the task, is proved by the statistical result of our *plébiscite* which we print elsewhere.

Our object, however, in alluding to this "Business" article is more especially to point out that under cover of this playfulness, the pharmaceutical official organ conceals its determination to show an offensive attitude towards the outsiders of the trade—that is, towards those who do not see a sufficiently tempting *quid pro quo* for the guinea per annum which they must spend if they wish to vote officially on a question like this. As far as we are concerned this is the real point at issue. The Poisons Regulations may be good in themselves; we have argued for them in these pages. But in generosity—no, in justice, the Council should not have dared to try to get them enacted without consulting all who would be affected by them. The *Pharmaceutical Journal*, in the article we have mentioned, compares us to Bismarck. Shall we retaliate? A few months since, there was a statesman on the pinnacle of power and popularity, now beneath the contempt of his own countrymen because he declared war "with a light heart." Will the Council read the lesson? With unbecoming levity they have thrown down gage of battle to ten thousand men who would have willingly acknowledged their honourable position. We take up the gage in earnest. The ten thousand are at our back, and deserters from the opposite camp flock to our ranks. The Poisons Regulations have been abandoned, but we are not sure that a better spirit has been instilled. Indeed, we have good reason to think otherwise; but the issue of such a carelessly provoked contest cannot be doubtful. Might and right are on our side, pitched against a few men who hope to succeed because they are "dressed in a little brief authority."

DR. ATTFIELD.

SURELY the Professor must have been as well satisfied as his audience with the result of the last evening meeting. His subject was of grave importance, the members most attentive, and the ensuing discussion one of the best our reporter has had to chronicle. The speakers were Professors Frankland, Redwood, Odling, and Dr. Quain. Dr. Attfield had to explain that the time had now arrived when a nomenclature based on strictly pharmaceutical grounds might be introduced amongst ourselves, and that chemical nomenclature, beautiful as it was and definite, could not readily be adopted.

The point is this: Change in or of nomenclature appeals in a totally different manner to two classes, who might be supposed to have identical interests;—for interests read sympathies, and the case is plain—these two are chemists working in a laboratory and pharmacists employed behind the counter. To the first nomenclature is a system of accurate labelling, each name is the expression of some theoretical truth. Therefore this nomenclature has changed, will change, and must change—for it follows in the immediate tract of discovery. A chemist would gladly upset his whole nomenclature to-morrow, if the change represented to him more accurately what he conceives to be the abstract truth. But with the pharmacist it is not so; he desires a certain set of names that may clearly, intelligently, and with sufficient accuracy, represent chemical substances; he does not care that such names should convey an intimate exposition of their nature and composition, and thus to a large extent he is independent of theory.

Let it not for a moment be supposed that any slight is passed on synonyms and chemical nomenclature. Far otherwise; the beauty of such terms as mercurous chloride and mercuric chloride cannot be over-estimated. Compound names, such as potassium iodide, lead acetate, ammonium bromide, and an array of carbonates, acetates, and chlorides appeal to our common sense. These will remain, and we are at full liberty to adopt them; but there are a mass of others which must follow inevitably the fortunes of the next successful investigation in abstract chemistry. Simpler, if possibly less accurate, terms will suit our purpose, and will prove an advantage as far as popular intelligence is concerned. Hence, with regard to the adoption of these chemical names, Professor Attfield's first main position is, they would cause embarrassment, they would not be generally intelligible. *Non possumus.*

Thus we get to a second point—the old names are not sufficiently descriptive; chemical terms are not practically useful. Let us fall back on pharmacy, and from it print our labels.

But Professor Attfield, with extreme modesty, has omitted one capital argument. Our daily acquaintance with chemical substances comes to us in a stereotyped and traditional manner, not merely in Latin, but in conventionally contracted Latin. One moment's observation will convince the reader that while the proposed names may be read off in correct Latinity without a shadow of trouble, chemical nomenclature cannot submit to the same ordeal. Take, for instance, Carbonate and Bicarbonate of Sodium. Latinize these in contracted form:—

Sod. Carb.
Sod. Bicarb.

Would it not task the ingenuity of our scholars to render the synonyms in contracted Latin?—

I.
Disodic carbonate.

II.
Acid potassium carbonate.
Hydrogen potassium carbonate.
Mono-potassic carbonate.

Professor Attfield has himself alluded to the fact that the contracted Latin of the synonyms would lead to considerable ambiguity, thus—

Mercurous Chloride = Calomel = Hyd. Chlorid.
Mercuric Chloride = Corrosive Sublimate = Hyd. Chlorid.

The contractions are the same.

Finally, in what manner would the physician convey his directions in an intelligible manner respecting remedial agents such as these?—

Hydrogen Acetate *v.* Acetic Acid, Ethyl Hydrate *v.* Alcohol, Ammonium Hydrate *v.* Ammonia, Mercuric-ammonium Chloride *v.* Ammoniated Mercury, Hydrogen Benzoate *v.* Benzoic Acid, [a]Acid Potassium Carbonate, [b]Hydrogen Potassium Carbonate, [c]Mono-potassic Carbonate *v.* Bicarbonate of Potassium, Hydrogen Borate *v.* Boracic Acid, Hydrogen Carbolate *v.* Carbolic Acid, Dipotassic Carbonate *v.* Carbonate of Potassium, Methenyl Chloride *v.* Chloroform, Ethyl Oxide *v.* Ether, Propenyl Alcohol *v.* Glycerine, Calcium Orthophosphate *v.* Phosphate of Calcium, and Disodiohydric Phosphate *v.* Phosphate of Sodium.

The list might be indefinitely extended, but the whole of these examples are extracted from Professor Attfield's own illustrations to his lecture. Clearly, he has proved his point, and shown that chemistry and pharmacy, though branches of the same science, have distinctive characters, and that it will be for the mutual advantage of both to adopt a nomenclature of their own. JOSEPH INCE.

THE PHARMACEUTICAL SOCIETY.

EVENING MEETING, APRIL 5, 1871.

MR. SANDFORD, PRESIDENT, IN THE CHAIR.

MR. BLAND exhibited some small parcels of poisons, obtained from various dealers, not registered chemists, sent out in the most careless manner, many without labels of any kind, some screwed up like half an ounce of tobacco, some like a quarter of a pound of sugar. Among the specimens were small parcels of orpiment, cyanide of potassium, oxalic acid, and acetate of lead. The President remarked that the police had power to prosecute the sellers of these poisons at once. Mr. Bland stated that he could trace to the vendors every specimen, but the names were not mentioned.

The subject was not further discussed.

Professor ATTFIELD then read the paper of the evening, on

THE CHEMICAL NOMENCLATURE OF THE PHARMACOPŒIA,

With Suggestions for its Revision.

The vocabulary of technical terms, or nomenclature, of a pharmacopœia is chemical, botanical, zoological, and galenical. In the following paper chemical nomenclature is alone considered.

Introductory Remarks.—The chemical nomenclature of the current Pharmacopœias is mainly scientific, founded on theory, and therefore liable to change. Its one great fault, in relation to medicine and pharmacy, is mutability—a fault, and a great fault, because the life and health of people are largely dependent on the perfect understanding which should always subsist between physician and pharmacist respecting names of medicines which the former prescribes and the latter prepares. But it is a fault which cannot altogether be avoided. For a name is seldom given haphazard; it is commonly designed to express our ideas regarding a thing or substance, and as those ideas are developed and extended, our point of view or theory respecting them necessarily changes; the old name is no longer consistent with our knowledge, and must therefore be also changed. Moreover, there is a limit to the power of language, and desirable as may be a system of names for remedial agents which shall be fixed, abiding, permanent, the production of such a system in the present state of knowledge is altogether impossible. What, then, are pharmacists, medical practitioners and others to do when chemical names they have accepted on authority are, by the same authority, modified or abandoned? Within the last few years the views hitherto prevailing of the constitution of matter have undergone radical alteration, being no longer consistent with ascertained truths, and the nomenclature or language embodying those views has, of course, shared the fate of the theories. Under these circumstances, by what principles are we to be guided in adopting for medicine, pharmacy, and the Pharmacopœia, such names as, on the one hand, shall be perfectly explicit, readily understood, unambiguous; and, on the other, consistent, or at least harmonious with prevailing chemical theories as expressed in the educational literature of the science? For not only is it to be remembered that changes must be expected in pharmacopœial names because we have already adopted and employ a nomenclature which, in the nature of things, is liable to change; but we must bear in mind that the successors to men now in practice are learning chemistry by aid of the new hypotheses, and their progress is impeded by old forms of language and by the erroneous notions which that language imparts. This state of things cannot continue; the march of science has ever been aided, never hindered by medicine or pharmacy. But what position are we to take in respect to this subject? The question is one that demands careful attention. I have endeavoured to answer it myself, and now venture to give to others the train of thought I have followed, and the conclusions at which I have arrived.

Outline of the Paper.—I intend, firstly, to outline the history and present position of the chemical names already employed in Pharmacopœias, especially the British, and to glance at the causes of the recent revolution in chemical nomenclature; and to do so, not by way of aiding the followers of medicine to criticize matters purely chemical, but to enable them to arrive at sound conclusions respecting the application of modern chemical nomenclature to pharmacy. I shall then shortly allude to chemical notation, which is inseparably connected with my subject; mention disadvantages attending alterations in chemical names; state the functions and positive or negative qualities which names should possess; give a complete list of current pharmacopœial names, with the names now proposed, and their scientific synonyms; and finally refer to names requiring special or exceptional treatment.

History and present position of the chemical names of the Pharmacopœia.—The system of nomenclature hitherto accepted from chemists by pharmacists, practitioners in medicine and the public, that which is employed in European and American pharmacopœias, was mainly devised by Lavoisier, eighty-four years ago. The fundamental principle on which it was founded was, that the name of a salt should express its composition. The many animal and vegetable substances discovered since that time (notably alkaloids and neutral crystalline principles) are designated, perhaps fortunately, by unsystematic names, names which, at all events, are not liable to change, and which may, therefore, be omitted from consideration in this paper. The great majority of chemical substances employed in pharmacy are such mineral salts as were known to Lavoisier, and their names were given by him on the assumption that they contained, on the one hand, an undecomposable body, generally a metal, common to a whole class of salts (the compounds of *copper*, for example), and on the other, a body, or a group of elements, also common to a number of salts (*sulphates*, for example). Soda, potash, lime, baryta, magnesia, and alumina were then considered to be elements; hence, as I shall further show presently, such names as carbonate of soda, nitrate of potash, and sulphate of baryta were perfectly consistent with those of carbonate of iron, nitrate of mercury, sulphate of copper. During the twenty years succeeding 1787, Lavoisier's views of the constitution of salts and the language or nomenclature in which those views found expression, were generally accepted throughout Europe. Green vitriol, blue vitriol, Glauber's salt, and gypsum, for example, were considered to contain, on the one hand, the "elements" iron, copper, soda, and lime respectively, and, on the other, a group of elements common to each of the four compounds; the four different elements were indicated in the spoken and written nomenclature of the compounds by their four names, iron, copper, soda, lime, while the one group and its presence in each of the four compounds was indicated in the spoken and written nomenclature of the compounds by the word sulphate; sulphate of iron, sulphate of copper, sulphate of soda, sulphate of lime. This change from such trivial names as green vitriol, blue vitriol, Glauber's salt, and gypsum to the systematic chemical names sulphate of iron, sulphate of copper, sulphate of soda, sulphate of lime, seems to have been effected without much opposition. At that time comparatively few persons were interested in, or affected by the matter, and radical changes of this kind are made with less difficulty by the few than the many. Afterwards it was felt that the multiplication of hemical substances by discovery rendered adherence to a rivial and arbitrary nomenclature impossible, and the doption of Lavoisier's scientific plan imperative. Lavoisier ot the world out of a difficulty, not placed it in one, when e introduced the principle of scientific nomenclature.

Up to 1807 no necessity arose for interfering with the omenclature of Lavoisier; but in that and the following ear Davy made his brilliant researches on the alkalies and lkaline earths, discovered that potash, soda, baryta, trontia and lime were not elements, as previously had been upposed, but that the true basylous radicals of the so-alled compounds of potash, soda, baryta, strontia and ime were metals—to which were given the names otassium, sodium, barium, strontium and calcium. Thenceorward the old names, potash, soda, baryta, strontia, lime, ere used to designate the oxides of the new metals. Then t once there arose a dilemma in regard to nomenclature. The names of all the salts of Davy's metals were no longer onsistent with the names of the salts of all other metals. While on the one hand the names "sulphate of copper" and 'sulphate of iron" distinctly expressed the compounds ormed by the union of metallic "copper" or metallic "iron" with a common acidulous group of elements, represented by he word "sulphate," the names "sulphate of soda" and 'sulphate of lime" as distinctly expressed compounds formed y the union of oxide of sodium and oxide of calcium with a common acidulous radical still indicated by the word "sulphate," but not having the same composition as having less oxygen than) the similar acidulous radical nited with the copper and the iron. It was felt that ither such words as sulphate, nitrate, and carbonate, must ach have two significations, and the salts of the alkalies nd alkaline earths be considered as compounds of oxides f metals, and all other salts (sulphate of iron, etc.) as compounds of metals, or such words (sulphate, nitrate, carbonate, etc.) must have a common (though an altered) signification, and all oxygen salts be considered as compounds of xides of metals. Davy, supported afterwards by Dulong, Clark, Graham, Liebig, and Daniell, suggested that all netallic salts were composed of metal alone on the basylous side, and a distinct radical on the acidulous side. Unfortunately, however, accurate knowledge of constitution was ncluded in this idea; even definite names being proposed or the said acidulous radicals. Thus blue vitriol was termed oxysulphionide of copper (Daniell,) sulphat-oxide of copper (Graham), and sulphanide of copper (Otto). Many other objections to the theory arose, and hence salts came to be regarded as compounds of oxides of metals with certain cidulous radicals (now known as anhydrides.) But the ollowers of applied chemistry never took kindly to the nomenclature; such names as sulphate of oxide of iron, nitrate of oxide of silver, acetate of oxide of lead, got shortened to sulphate of iron, nitrate of silver, acetate of lead; a matter of no great moment to anyone who had become a chemist, but of considerable importance to everyone learning to be a chemist. The names acetate of lead, iodide of lead, etc., logically planted in the mind the impression that the compounds were formed of ead with the radical of acetates and lead with the radical of iodides,—a natural idea, which had to be unlearned, and by considerable effort of memory a mere conventional one put in its place, namely, that certain acidulous radicals iodine, sulphur, etc.) combined with metals, while certain others (anhydrides, formerly called acids) with oxides of metals. Again, that a yellow granular precipitate, caused by the addition of perchloride of platinum to a liquid sometimes indicated potassium and sometimes potash, or that a ertain black coloration sometimes indicated lead and sometimes oxide of lead, were illogical statements against which he mind naturally rebelled. It is true an explanation was fforded of such anomalies by the assumption that even haloid alts (such as iodide of potassium), on dissolving in water, became true salts of oxides of metals (hydriodate of potash); but weighty arguments were adducible against this hypothesis. In short, no theory of the constitution of salts was offered, or has yet been offered which satisfactorily explains and harmonizes all known facts respecting salts. Hence, when a very few years ago chemists were led by irresistible arguments and stubborn facts to double many of the old atomic weights, an opportunity of abandoning existing constitutional theories then presented itself, and was by common consent accepted. The exertions of Dumas, Laurent, and Gerhardt bore fruit. The dualistic idea of salts being formed of an acidulous radical with the oxide of a metal, and the not less binary notion of their being composed of a distinct acidulous radical united with a metal, were renounced, and the hypothesis altogether rejected, or, at all events, restricted to the idea of oneness. These views were, of course, accompanied by a commensurate alteration in chemical notation and nomenclature. Blue vitriol no longer being considered to be the sulphate of the oxide of copper, as shown in the formula CuO,SO_3, nor even to have the binary constitution implied in the formula Cu,SO_4, but to be a structure *per se*, or, at least, one whose detail of constitution was unknown,—it became necessary to devise for it and all such salts, a notation and nomenclature which should be consistent with the unitary idea. Strictly speaking, this was impossible. The relationship, nay, the absolute identity of the constituent radicals in whole classes of salts demanded fair representation in notation and nomenclature, a result fatal to pure unitary ideas. Thus, the unquestioned relationship of the cupreous compounds to each other demanded the employment of the word "copper" in their names and the symbol Cu in their formulæ; while the unquestioned relationship of salts containing the elements which occur in the non-cupreous portion of blue vitriol demanded the employment of the word "sulphate" in their names and the symbols SO_4 in their formulæ, and with the employment of such names and such formulæ the binary idea is difficult to repress. At the same time all are agreed that the unqualified assumption of knowledge of chemical constitution involved in the old binary theories is wrong, hence professedly binary systems of notation and nomenclature must be relinquished; the names sulphate of oxide of copper, with its formula CuO,SO_3, and sulphate of oxide of magnesium (or sulphate of magnesia), with its formula MgO,SO_3, must be given up for sulphate of copper $CuSO_4$ (or copper sulphate or cupric sulphate), and sulphate of magnesium $MgSO_4$ (or magnesium sulphate). Such names and formulæ sufficiently exhibit unquestioned relationships, while they include the least possible amount of theory.

Chemical Notation.—I would offer a few additional sentences respecting chemical notation. All teachers of chemistry, including the authors of nearly every modern manual, with remarkable unanimity have relinquished the old system of notation, that which was exclusively employed in the British Pharmacopœia of 1864, and have, to a greater or less extent, adopted the new. In the present (1867) Pharmacopœia the new notation is represented by formulæ printed in Egyptian type (**K N O**$_3$), the old by formulæ in Roman (KO,NO_5); a course suggested by the unsettled condition of the subject at the time this Pharmacopœia was published. It is to be expected that the next British Parmacopœia—still "representing accurately, yet with caution, the advancement made in chemistry and pharmacy" (*vide* Preface), and reflecting the settled practice of scientific chemists—will employ the usual chemical symbols as expressive of the new atomic weights ($O=16$) to the exclusion of the old ($O=8$), and will altogether discard the hypothesis of the constitution of salts involved in such formulæ as KO,NO_5, or (accepting the new atomic weights) K_2O,N_2O_5, using only the less theoretical formulæ (*e.g.*, KNO_3) which are now employed by the majority of teachers. The following formulæ will further illustrate what has just been stated:—

Old and New Chemical Formulæ.

	Old atomic weights and dualistic hypothesis.	Old atomic weights and binary hypothesis.	New atomic weights with dualistic hypothesis.	New atomic weights with binary hypothesis.	New atomic weights with unitary hypothesis.
Nitre	KO,NO_5	K,NO_6	K_2O,N_2O_5	K,NO_3	KNO_3
Pearlash (anhydrous)	KO,CO_2	K,CO_3	K_2O,CO_2	K_2,CO_3	K_2CO_3
Epsom salt (anhydrous)	MgO,SO_3	Mg,SO_4	MgO,SO_3	Mg,SO_4	$MgSO_4$
Old atomic weights	K,39; Mg,12; N,14; O,8; C,6; S,16.				
New atomic weights	K,39; Mg,24; N,14; O,16; C,12; S,32.				

Little more need be said in favour of the exclusive employment of modern chemical notation in future British Pharmacopœias. Arguments for or against the atomic and other theories and hypotheses concerning the constitution of salts on which this notation is based would be out of place in this paper. The old system is given up by chemists; the new is already officially recognised by the Council under whose authority the Pharmacopœia is issued, and by the various examining Boards,* and is adopted in educational works on chemistry.

These are sufficient reasons for justifying us in the expectation of seeing the new notation, if any, alone employed in the third British Pharmacopœia. This much on chemical notation it was desirable to state; for it is inseparably connected with the chemical nomenclature of a Pharmacopœia. Indeed, notation and nomenclature should obviously harmonize, seeing that they are simply different methods of expressing the thoughts and wants of everybody respecting chemical substances. Formulæ are more comprehensive than names, and convey to the mind far more information, but they are intelligible only to the educated chemist. Names comprise less knowledge, but are more or less understood by all, and suffice for general purposes. To formulæ, however, we look to ascertain the views of chemists concerning the constitution of chemical compounds, and it is on these views that chemical nomenclature is founded.

Disadvantages attending alterations in Nomenclature.—Thus far have I endeavoured to outline the progress of chemistry in these directions which affect chemical nomenclature, those which suggest modification in the chemical names of pharmacopœial substances. Such names as nitrate of potash and sulphate of magnesia are unwarrantably theoretic and not now current in chemical literature. How can these and similar names be modified, and to what extent must modification be carried? Before answering the question and proposing a modified system of nomenclature, I would allude to (*a*) the alteration of chemical names as involving disadvantages, and (*b*) the properties of names. The disadvantages are obvious, unquestionable, and to be avoided whenever practicable. Scientific chemists, those with whom originate new discoveries of specific and generic truths, meet with these difficulties to a very small extent. Modification and extension of mental views respecting the constitution of chemical compounds are necessarily accompanied by modification and extension of the language in which those views are expressed; hence alterations in chemical nomenclature are naturally met with in the original memoirs recording new discoveries. Indeed, altered nomenclature is advantageous, rather than the opposite, while confined to the literature of original research, for it assists the mind in comprehending new truths. But such restriction is only possible for a time. Each additional discovery, whether relating to old substances or new, gives additional impetus to the ever-advancing waves of knowledge until the old landmarks have to be removed or relinquished, and reconstruction becomes inevitable. Here commence difficulties; for while alteration in language is easy and convenient to followers of pure science, because a natural consequence of altered mental views, it is excessively troublesome and inconvenient to the followers of applied science, who have to entertain the alterations first and the reasons afterwards.

More than this, most serious consequences have sometimes resulted to patients from one medicine being substituted for another, solely through variation in nomenclature. But I need say nothing further on this head: it has already been adverted to at the commencement of this paper, and has been fully and ably treated, either specially or incidentally, by the following writers on pharmacopœial nomenclature:—

PHARMACEUTICAL JOURNAL: Jacob Bell, Dr. Paris, Dr. Pereira, Vol. II., 1st Ser., pp. 369-374; Mr. E. Thompson, Vol. VIII., 1st Ser., p. 3; Mr. A. F. Haselden, Vol. I., 2nd Ser., p. 112; 'C. W. M.' and the well-known initials 'C. W. Q.' Vol. III., 2nd Ser., p. 335; Professor Redwood, Vol. VI., 2nd Ser., p. 566; in Vol. VII., 2nd Ser., 'On the Vegetable Drugs,' by Mr. Daniel Hanbury, p. 96; Mr. Henry Deane, p. 101; Mr. Proctor, p. 381; Mr. T. Lowe, p. 409; Mr. J. C. Brough, Vol. VIII., 2nd Ser., p. 214; Mr. J. C. Wilson, Vol. IX., 2nd Ser., p. 363.

Properties of Names.—The names of pharmacopœial chemicals should fulfil certain functions or possess definite qualities, positive or negative, namely,—

1. The name should, as far as possible and practicable, indicate composition. This Lavoisierian principle is, as I have already shown, one of necessity as well as expediency.

2. One name should be associated with only one substance; but the converse I would by no means urge, namely, that one substance should be known by only one name, synonyms being useful both from a theoretical and a practical point of view.

3. A name, even if fallen out of use, should not be transferred to a substance having properties different from the original substance.

4. The name of an official chemical substance, that is, a name officially recognised in national pharmacopæias, should possess the minimum of instability This quality is most important. Verbal changes of almost any kind are unpopular; changes in chemical nomenclature have done much to retard the progress of chemistry amongst the people; but changes in the names of pharmacopœial chemicals are objectionable in the interest of medical practitioners, their patients, and pharmacists.

The free employment of Latin and Greek numerals in a chemical name was strongly advocated by the late Professor Miller. But though highly useful in general chemical literature for indicating details of composition, the principle is too dependent on hypothesis respecting atomic values and weights, and too susceptible of disturbance caused by new discoveries to possess the element of permanence; hence it must be avoided in pharmaceutical chemistry.

5. A pharmacopœial name should admit of being either easily spoken or written, both in the full and in the contracted form, in modern languages and in Latin.

6. When close resemblance between two salts is indicated by identity in all but one of the syllables of their names, that syllable should be at the commencement of the names and not at the end, where it would be liable to be omitted by a prescriber. Indeed, such variations are often indicated with most usefulness by a separate word altogether, confusion and even mischief being thereby avoided. Thus, for calomel and corrosive sublimate the names *subchloride of mercury* and *perchloride of mercury* are greatly to be preferred to *mercurous chloride* and *mercuric chloride*; for a physician, in writing a prescription, would contract the former to *hydr. subchlor.* and *hydr. perchlor.*, which are still sufficiently distinctive, while the others would *both* be liable to be contracted to *hyd. chlor.*, and a patient perhaps be killed by corrosive sublimate instead of cured by calomel. So *green iodide of mercury* and *red iodide of mercury* are better than *mercurous iodide* and *mercuric iodide*, or *green sulphate of iron* and *persulphate of iron* to *ferrous sulphate* and *ferric sulphate*; any greater precision that may be desired being given by chemical formulæ.

7. A name should not be changed for mere purpose of euphony, real or fancied; thus, chlorhydric for hydrochloric.

8. Names of pharmacopœial chemicals should be consistent with each other.

9. The chemical names employed in pharmacy should be consistent with those used in other branches of applied chemistry, and with the language of scientific chemistry and general chemical literature. I say consistent, certainly not identical. *For I believe the time has come when, by making a few slight alterations in the terminations of a few of our chemica names, we shall have a system of pharmaceutical nomenclatur which, while perfectly harmonious with, is quite independent of scientific chemical nomenclature, and which therefore contain greater elements of permanence than any yet adopted.* Thes

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* EXTRACTS FROM LETTERS TO THE AUTHOR.

Royal College of Physicians, London. "I am instructed to say that the Examiners here accept either notation. While themselves adopting the new, they are unwilling to jeopardize the chances of those who have been educated and accustomed to the old."—Henry Moody, Secretary.

Royal College of Surgeons, London. "Only in the Preliminary Examination is chemistry included. The new system of notation is adopted by the Examiners."—Edward Trimmer, Secretary.

The Society of Apothecaries, London. "Candidates are allowed to use the old or the new notation, according as they have been instructed."—R. H. Robertson, Secretary.

The Pharmaceutical Society of Great Britain. "The *new* notation is recognised by the Board, but candidates having an imperfect knowledge of this system are not rejected if they possess a sufficient acquaintance with the *old* notation —Elias Bremridge Secretary.

alterations, be it noted, are in the terminations of the names only; hence the contracted names almost universally used by physicians and pharmacists would in no way be interfered with,—an argument which, if somewhat left-handed, must be admitted to be one of great strength.

THE PROPOSED NAMES.

The following is a table of names of all the chemical substances in the British Pharmacopœia. Column I. contains the official names; Column II. the names now suggested for employment in pharmacy, medicine, and the next edition of the British Pharmacopœia; Column III. the unitary nomenclature of modern chemistry. The advantages claimed for the proposed names, are that they are more consistent with each other than the old; they are formed on one uniform system instead of two; they include less of theory, and therefore have greater elements of stability than the old; and they are harmonious, whilst the old is absolutely inconsistent, with both modern scientific nomenclature and the only chemical notation now employed. Their newness, so far as they are new, is their only disadvantage, and even this disadvantage is, in practice, reduced to insignificant proportions.

Column II. also contains a few exceptional alterations, to which I shall allude subsequently.

OLD NAMES.	PROPOSED NAMES.	SYNONYMS.
Acetate of ammonia.	Acetate of *ammonium.*	*Ammonium acetate.* *Ammonic acetate.*
Acetate of copper.	Acetate of copper.	*Cupric acetate.*
Acetate of iron.	Acetate of iron.	*Ferric acetate.*
Acetate of lead.	Acetate of lead.	*Lead acetate.* *Plumbic acetate.*
Acetate of morphia.	Acetate of morphia.	*Morphia acetate.*
Acetate of potash.	Acetate of *potassium.*	*Potassium acetate.* *Potassic acetate.*
Acetate of soda.	Acetate of *sodium.*	*Sodium acetate.* *Sodic acetate.*
Acetate of zinc.	Acetate of zinc.	*Zinc acetate.*
Acetic acid.	Acetic acid.	*Hydrogen acetate.* Acetic acid.
Acid tartrate of potash.	Acid tartrate of *potassium.*	*Acid potassium tartrate.*
Aconitia.	Aconitia.	Aconitia, *or aconitine.*
Albumen.	Albumen.	Albumen.
Alcohol.	Alcohol.	*Ethel hydrate.* Alcohol, *or ethel alcohol.*
Alum.	Alum.	Alum.
Ammonia.	Ammonia. *Hydrate of ammonium* (*syn*)	Ammonia. *Ammonium hydrate.*
Ammoniated mercury.	Ammoniated mercury.	*Mercuric - ammonium chloride.*
Ammonio-nitrate of silver.	Ammonio-nitrate of silver.	*Argent-ammonium nitrate.*
Ammonio-sulphate of copper.	Ammonio-sulphate of copper.	*Cupro-diamonium sulphate.*
Ammonio-sulphate of magnesia.	Ammonio-sulphate of *magnesium.*	*Ammonio-magnesian sulphate.*
Amylic alcohol.	Amylic alcohol.	*Amyl alcohol.*
Arseniate of iron.	Arseniate of iron.	*Ferrous arsenate.*
Arseniate of soda.	Arseniate of *sodium.*	*Sodium arsenate.*
Arsenious acid.	*White arsenic.*	*Arsenious oxide.*
Atropia.	Atropia.	Atropia, *or atropine.*
Benzoate of ammonia.	Benzoate of *ammonium.*	*Ammonium benzoate.*
Benzoic acid.	Benzoic acid.	*Hydrogen benzoate.* Benzoic acid.
Benzol.	Benzol.	*Benzene.*
Bicarbonate of potash.	Bicarbonate of *potassium.*	*Acid potassium carbonate.* *Hydrogen potassium carbonate.* *Mono-potassic carbonate.*
Bicarbonate of soda.	Bicarbonate of *sodium.*	*Acid sodium carbonate.* *Hydrogen sodium carbonate.* *Mono-sodic carbonate.* *Hydro-sodic carbonate.*
Bichromate of potash.	*Red chromate of potassium.*	*Potassium anhydrochromate.* *Potassium bichromate.*
Bismuth.	Bismuth.	Bismuth.
Black antimony.	Black *sulphide of* antimony.	*Antimonious sulphide.*
Black oxide of manganese.	Black oxide of manganese.	*Manganese dioxide or peroxide.*
Boracic acid.	Boracic acid.	*Hydrogen borate.* *Boric acid.* Boracic acid.
Borax.	Borax.	*Sodium anhydroborate.* Borax.
Bromide of ammonium.	Bromide of ammonium.	*Ammonium bromide.*
Bromide of potassium.	Bromide of potassium.	*Potassium bromide.*
Bromine.	Bromine.	Bromine.
Calomel (syn.)	Calomel (syn.)	*Mercurous chloride.* Calomel.
Camphor.	Camphor.	Camphor.
Carbolic acid.	Carbolic acid.	*Hydrogen carbolate.* Carbolic acid.
Carbonate of ammonia.	Carbonate of *ammonium.*	*Ammonium carbonate.*
Carbonate of bismuth.	*Oxycarbonate* of bismuth (syn.)	*Bismuth oxycarbonate.*
Carbonate of iron.	Carbonate of iron.	*Ferrous carbonate.*
Carbonate of lead.	Carbonate of lead.	*Lead carbonate.* (?) *Triplumbic dihydrate dicarbonate.*
Carbonate of lime.	Carbonate of *calcium.*	*Calcium carbonate.*
Carbonate of lithia.	Carbonate of *lithium.*	*Lithium carbonate.*
Carbonate of magnesia.	Carbonate of *magnesium.*	*Magnesium carbonate.* (?) *Tetrahydrous dihydric tetramagnesic tricarbonate.*
Carbonate of potash.	Carbonate of *potassium.*	*Dipotassic carbonate.* *Potassium carbonate.*
Carbonate of soda.	Carbonate of *sodium.*	*Disodic carbonate.* *Sodium carbonate.*
Carbonate of zinc.	Carbonate of zinc.	*Zinc carbonate.*
Caustic potash.	Caustic potash. *Hydrate of potassium* (*syn.*)	Caustic potash. *Potassium hydrate.*
Caustic soda.	Caustic soda. *Hydrate of sodium* (*syn.*)	Caustic soda. *Sodium hydrate.*
Chalk.	Chalk.	*Calcium carbonate.* Chalk.
Chlorate of potash.	Chlorate of *potassium.*	*Potassium chlorate.*
Chloride of ammonium.	Chloride of ammonium.	*Ammonium chloride.*
Chloride of antimony.	Chloride of antimony.	*Antimony trichloride.* *Antimonious chloride.*
Chloride of barium.	Chloride of barium.	*Barium chloride.* *Baric chloride.*
Chloride of calcium.	Chloride of calcium.	*Calcium chloride.* *Calcic chloride.*
Chloride of gold.	*Per*chloride of gold.	*Auric chloride.*
Chloride of sodium.	Chloride of sodium.	*Sodium chloride.*
Chloride of tin.	*Stannous chloride.*	*Stannous chloride.*
Chloride of zinc.	Chloride of zinc.	*Zinc chloride.*
Chlorinated lime.	Chlorinated lime.	*Chloride of lime.*
Chlorinated soda.	Chlorinated soda.	*Chloride of soda.*
Chlorine.	Chlorine.	Chlorine.
Chloroform.	Chloroform.	*Methenyl chloride.* Chloroform.
Citrate of ammonia.	Citrate of *ammonium.*	*Ammonium citrate.*
Citrate of bismuth and ammonia.	Citrate of bismuth and *ammonium.*	*Bismuth ammonio-citrate.* *Ammonium and bismuthous citrate.*
Citrate of iron and ammonia.	Citrate of iron and *ammonium.*	*Ferric ammonio-citrate.* *Ferric and ammonium citrate.*
Citrate of iron and quinia.	Citrate of iron and quinia.	*Ferric quinio-citrate.* *Quinia ferri-citrate.* *Ferric and quinia citrate.*
Citrate of lithia.	Citrate of *lithium.*	*Lithium citrate.*
Citrate of potash.	Citrate of *potassium.*	*Potassium citrate.*
Citric acid.	Citric acid.	*Hydrogen citrate.* Citric acid.
Citro-tartrate of soda.	Citro-tartrate of *sodium.*	*Sodium citro-tartrate.*
Conia.	Conia.	Conia *or conine.*
Copper.	Copper.	Copper.
Corrosive sublimate (syn.)	Corrosive sublimate (syn.)	*Mercuric chloride.* Corrosive sublimate.
Digitalin.	Digitalin.	Digitalin.
Dried alum.	Dried alum.	Dried alum.
Dried carbonate of soda.	Dried carbonate of *sodium.*	Dried *sodium carbonate.*
Dried sulphate of iron.	Dried sulphate of iron.	Dried ferrous sulphate.
Ether.	Ether.	*Ethyl oxide.* Ether.
Ferrocyanide of potassium (syn.)	Ferrocyanide of potassium.	*Potassium ferrocyanide.*
Gallic acid.	Gallic acid.	*Hydrogen gallate.* Gallic acid.
Gelatine.	Gelatine.	Gelatin.
Glycerine.	Glycerine.	*Propenyl alcohol.* Glycerin.
Granulated sulphate of iron.	Granulated sulphate of iron.	Granulated *ferrous sulphate.*
Hydrated peroxide of iron.	*Peroxyhydrate of iron.*	*Ferric oxyhydrate.*
Hydrochlorate of morphia.	Hydrochlorate of morphia.	*Morphine hydrochlorate.*
Hydrochloric acid.	Hydrochloric acid.	*Hydrogen chloride.* *Chlorhydric acid.* Hydrochloric acid.
Hydrochloric sol. of arsenic.	Hydrochloric sol. of arsenic.	Hydrochloric sol. of arsenic.
Hydrocyanic acid.	Hydrocyanic acid.	*Hydrogen cyanide.* Hydrocyanic acid.
Hyposulphite of soda.	Hyposulphite of *sodium.*	*Sodium hyposulphite.*
Indigo.	Indigo.	Indigo.
Iodate of potash.	Iodate of *potassium.*	*Potassium iodate.*
Iodide of cadmium.	Iodide of cadmium.	*Cadmium iodide, or Cadmic iodide.*
Iodide of iron.	Iodide of iron.	*Ferrous iodide.*
Iodide of lead.	Iodide of lead.	*Lead iodide, or Plumbic iodide.*
Iodide of mercury, green.	Iodide of mercury, green.	*Mercurous iodide.*
Iodide of mercury, red.	Iodide of mercury, red.	*Mercuric iodide.*
Iodide of potassium.	Iodide of potassium.	*Potassium iodide.*

Little more need be said in favour of the exclusive employment of modern chemical notation in future British Pharmacopœias. Arguments for or against the atomic and other theories and hypotheses concerning the constitution of salts on which this notation is based would be out of place in this paper. The old system is given up by chemists; the new is already officially recognised by the Council under whose authority the Pharmacopœia is issued, and by the various examining Boards,* and is adopted in educational works on chemistry.

These are sufficient reasons for justifying us in the expectation of seeing the new notation, if any, alone employed in the third British Pharmacopœia. This much on chemical notation it was desirable to state; for it is inseparably connected with the chemical nomenclature of a Pharmacopœia. Indeed, notation and nomenclature should obviously harmonize, seeing that they are simply different methods of expressing the thoughts and wants of everybody respecting chemical substances. Formulæ are more comprehensive than names, and convey to the mind far more information, but they are intelligible only to the educated chemist. Names comprise less knowledge, but are more or less understood by all, and suffice for general purposes. To formulæ, however, we look to ascertain the views of chemists concerning the constitution of chemical compounds, and it is on these views that chemical nomenclature is founded.

Disadvantages attending alterations in Nomenclature.—Thus far have I endeavoured to outline the progress of chemistry in those directions which affect chemical nomenclature, those which suggest modification in the chemical names of pharmacopœial substances. Such names as nitrate of potash and sulphate of magnesia are unwarrantably theoretic and not now current in chemical literature. How can these and similar names be modified, and to what extent must modification be carried? Before answering the question and proposing a modified system of nomenclature, I would allude to (*a*) the alteration of chemical names as involving disadvantages, and (*b*) the properties of names. The disadvantages are obvious, unquestionable, and to be avoided whenever practicable. Scientific chemists, those with whom originate new discoveries of specific and generic truths, meet with these difficulties to a very small extent. Modification and extension of mental views respecting the constitution of chemical compounds are necessarily accompanied by modification and extension of the language in which those views are expressed; hence alterations in chemical nomenclature are naturally met with in the original memoirs recording new discoveries. Indeed, altered nomenclature is advantageous, rather than the opposite, while confined to the literature of original research, for it assists the mind in comprehending new truths. But such restriction is only possible for a time. Each additional discovery, whether relating to old substances or new, gives additional impetus to the ever-advancing waves of knowledge until the old landmarks have to be removed or relinquished, and reconstruction becomes inevitable. Here commence difficulties; for while alteration in language is easy and convenient to followers of pure science, because a natural consequence of altered mental views, it is excessively troublesome and inconvenient to the followers of applied science, who have to entertain the alterations first and the reasons afterwards.

More than this, most serious consequences have sometimes resulted to patients from one medicine being substituted for another, solely through variation in nomenclature. But I need say nothing further on this head: it has already been adverted to at the commencement of this paper, and has been fully and ably treated, either specially or incidentally, by the following writers on pharmacopœial nomenclature:—

PHARMACEUTICAL JOURNAL: Jacob Bell, Dr. Paris, Dr. Pereira, Vol. II., 1st Ser., pp. 369-374; Mr. E. Thompson, Vol. VIII., 1st Ser., p. 3; Mr. A. F. Haselden, Vol. I., 2nd Ser., p. 112; 'C. W. M.' and the well-known initials 'C. W. Q.' Vol. III., 2nd Ser., p. 335; Professor Redwood, Vol. VI., 2nd Ser., p. 566; in Vol. VII., 2nd Ser., 'On the Vegetable Drugs,' by Mr. Daniel Hanbury, p. 96; Mr. Henry Deane, p. 101; Mr. Proctor, p. 381; Mr. T. Lowe, p. 409; Mr. J. C. Brough, Vol. VIII., 2nd Ser., p. 214; Mr. J. C. Wilson, Vol. IX., 2nd Ser., p. 363.

Properties of Names.—The names of pharmacopœial chemicals should fulfil certain functions or possess definite qualities, positive or negative, namely,—

1. The name should, as far as possible and practicable, indicate composition. This Lavoisierian principle is, as I have already shown, one of necessity as well as expediency.

2. One name should be associated with only one substance; but the converse I would by no means urge, namely, that one substance should be known by only one name, synonyms being useful both from a theoretical and a practical point of view.

3. A name, even if fallen out of use, should not be transferred to a substance having properties different from the original substance.

4. The name of an official chemical substance, that is, a name officially recognised in national pharmacopœias, should possess the minimum of instability This quality is most important. Verbal changes of almost any kind are unpopular; changes in chemical nomenclature have done much to retard the progress of chemistry amongst the people; but changes in the names of pharmacopœial chemicals are objectionable in the interest of medical practitioners, their patients, and pharmacists.

The free employment of Latin and Greek numerals in a chemical name was strongly advocated by the late Professor Miller. But though highly useful in general chemical literature for indicating details of composition, the principle is too dependent on hypothesis respecting atomic values and weights, and too susceptible of disturbance caused by new discoveries to possess the element of permanence; hence it must be avoided in pharmaceutical chemistry.

5. A pharmacopœial name should admit of being either easily spoken or written, both in the full and in the contracted form, in modern languages and in Latin.

6. When close resemblance between two salts is indicated by identity in all but one of the syllables of their names, that syllable should be at the commencement of the names and not at the end, where it would be liable to be omitted by a prescriber. Indeed, such variations are often indicated with most usefulness by a separate word altogether, confusion and even mischief being thereby avoided. Thus, for calomel and corrosive sublimate the names *subchloride of mercury* and *perchloride of mercury* are greatly to be preferred to *mercurous chloride* and *mercuric chloride;* for a physician, in writing a prescription, would contract the former to *hydr. subchlor.* and *hydr. perchlor.*, which are still sufficiently distinctive, while the others would *both* be liable to be contracted to *hyd. chlor.*, and a patient perhaps be killed by corrosive sublimate instead of cured by calomel. So *green iodide of mercury* and *red iodide of mercury* are better than *mercurous iodide* and *mercuric iodide*, or *green sulphate of iron* and *persulphate of iron* to *ferrous sulphate* and *ferric sulphate;* any greater precision that may be desired being given by chemical formulæ.

7. A name should not be changed for mere purpose of euphony, real or fancied; thus, chlorhydric for hydrochloric.

8. Names of pharmacopœial chemicals should be consistent with each other.

9. The chemical names employed in pharmacy should be consistent with those used in other branches of applied chemistry, and with the language of scientific chemistry and general chemical literature. I say consistent, certainly not identical. *For I believe the time has come when, by making a few slight alterations in the terminations of a few of our chemical names, we shall have a system of pharmaceutical nomenclature which, while perfectly harmonious with, is quite independent of, scientific chemical nomenclature, and which therefore contains greater elements of permanence than any yet adopted.* These

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* EXTRACTS FROM LETTERS TO THE AUTHOR.

Royal College of Physicians, London. "I am instructed to say that the Examiners here accept either notation. While themselves adopting the new, they are unwilling to jeopardize the chances of those who have been educated and accustomed to the old."—Henry Moody, Secretary.

Royal College of Surgeons, London. "Only in the Preliminary Examination is chemistry included. The new system of notation is adopted by the Examiners."—Edward Trimmer, Secretary.

The Society of Apothecaries, London. "Candidates are allowed to use the old or the new notation, according as they have been instructed."—R. H. Robertson, Secretary.

The Pharmaceutical Society of Great Britain. "The *new* notation is recognised by the Board, but candidates having an imperfect knowledge of this system are not rejected if they possess a sufficient acquaintance with the *old* notation —Elias Bremridge Secretary, alterations, be it noted, are in the terminations of the names only; hence the contracted names almost universally used by physicians and pharmacists would in no way be interfered with,—an argument which, if somewhat left-handed, must be admitted to be one of great strength.

THE PROPOSED NAMES.

The following is a table of names of all the chemical substances in the British Pharmacopœia. Column I. contains the official names; Column II. the names now suggested for employment in pharmacy, medicine, and the next edition of the British Pharmacopœia; Column III. the unitary nomenclature of modern chemistry. The advantages claimed for the proposed names, are that they are more consistent with each other than the old; they are formed on one uniform system instead of two; they include less of theory, and therefore have greater elements of stability than the old; and they are harmonious, whilst the old is absolutely inconsistent, with both modern scientific nomenclature and the only chemical notation now employed. Their newness, so far as they are new, is their only disadvantage, and even this disadvantage is, in practice, reduced to insignificant proportions.

Column II. also contains a few exceptional alterations, to which I shall allude subsequently.

OLD NAMES.	PROPOSED NAMES.	SYNONYMS.
Acetate of ammonia.	Acetate of *ammonium.*	*Ammonium acetate.* *Ammonic acetate.*
Acetate of copper.	Acetate of copper.	*Cupric acetate.*
Acetate of iron.	Acetate of iron.	*Ferric acetate.*
Acetate of lead.	Acetate of lead.	*Lead acetate.* *Plumbic acetate.*
Acetate of morphia.	Acetate of morphia.	*Morphia acetate.*
Acetate of potash.	Acetate of *potassium.*	*Potassium acetate.* *Potassic acetate.*
Acetate of soda.	Acetate of *sodium.*	*Sodium acetate.* *Sodic acetate.*
Acetate of zinc.	Acetate of zinc.	*Zinc acetate.*
Acetic acid.	Acetic acid.	*Hydrogen acetate.* Acetic acid.
Acid tartrate of potash.	Acid tartrate of *potassium.*	*Acid potassium tartrate.*
Aconitia.	Aconitia.	Aconitia, *or aconitine.*
Albumen.	Albumen.	Albumen.
Alcohol.	Alcohol.	*Ethel hydrate.* Alcohol, *or ethel alcohol.*
Alum.	Alum.	Alum.
Ammonia.	Ammonia. *Hydrate of ammonium (syn.)*	Ammonia. *Ammonium hydrate.*
Ammoniated mercury.	Ammoniated mercury.	*Mercuric - ammonium chloride.*
Ammonio-nitrate of silver.	Ammonio-nitrate of silver.	*Aryent-ammonium nitrate.*
Ammonio-sulphate of copper.	Ammonio-sulphate of copper.	*Cupro-diamonium sulphate.*
Ammonio-sulphate of magnesia.	Ammonio-sulphate of *magnesium.*	*Ammonio-magnesian sulphate.*
Amylic alcohol.	Amylic alcohol.	*Amyl alcohol.*
Arseniate of iron.	Arseniate of iron.	*Ferrous arsenate.*
Arseniate of soda.	Arseniate of *sodium.*	*Sodium arsenate.*
Arsenious acid.	*White arsenic.*	*Arsenious oxide.*
Atropia.	Atropia.	Atropia, *or atropine.*
Benzoate of ammonia.	Benzoate of *ammonium.*	*Ammonium benzoate.*
Benzoic acid.	Benzoic acid.	*Hydrogen benzoate.* Benzoic acid.
Benzol.	Benzol.	*Benzene.*
Bicarbonate of potash.	Bicarbonate of *potassium.*	*Acid potassium carbonate.* *Hydrogen potassium carbonate.* *Mono-potassic carbonate.*
Bicarbonate of soda.	Bicarbonate of *sodium.*	*Acid sodium carbonate.* *Hydrogen sodium carbonate.* *Mono-sodic carbonate.* *Hydro-sodic carbonate.*
Bichromate of potash.	*Red chromate of potassium.*	*Potassium anhydrochromate.* *Potassium bichromate.*
Bismuth.	Bismuth.	Bismuth.
Black antimony.	Black *sulphide of* antimony.	*Antimonious sulphide.*
Black oxide of manganese.	Black oxide of manganese.	*Manganese dioxide or peroxide.*
Boracic acid.	Boracic acid.	*Hydrogen borate.* *Boric acid.* Boracic acid.
Borax.	Borax.	*Sodium anhydroborate.* Borax.
Bromide of ammonium.	Bromide of ammonium.	*Ammonium bromide.*
Bromide of potassium.	Bromide of potassium.	*Potassium bromide.*
Bromine.	Bromine.	Bromine.
Calomel (syn.)	Calomel (syn.)	*Mercurous chloride.* Calomel.
Camphor.	Camphor.	Camphor.
Carbolic acid.	Carbolic acid.	*Hydrogen carbolate.* Carbolic acid.
Carbonate of ammonia.	Carbonate of *ammonium.*	*Ammonium carbonate.*
Carbonate of bismuth.	*Oxycarbonate* of bismuth (syn.)	*Bismuth oxycarbonate.*
Carbonate of iron.	Carbonate of iron.	*Ferrous carbonate.*
Carbonate of lead.	Carbonate of lead.	*Lead carbonate.* (?) *Triplumbic dihydrate dicarbonate.*
Carbonate of lime.	Carbonate of *calcium.*	*Calcium carbonate.*
Carbonate of lithia.	Carbonate of *lithium.*	*Lithium carbonate.*
Carbonate of magnesia.	Carbonate of *magnesium.*	*Magnesium carbonate.* (?) *Tetrahydrous dihydric tetramagnesic tricarbonate.*
Carbonate of potash.	Carbonate of *potassium.*	*Dipotassic carbonate.* *Potassium carbonate.*
Carbonate of soda.	Carbonate of *sodium.*	*Disodic carbonate.* *Sodium carbonate.*
Carbonate of zinc.	Carbonate of zinc.	*Zinc carbonate.*
Caustic potash.	Caustic potash. *Hydrate of potassium (syn.)*	Caustic potash. *Potassium hydrate.*
Caustic soda.	Caustic soda. *Hydrate of sodium (syn.)*	Caustic soda. *Sodium hydrate.*
Chalk.	Chalk.	*Calcium carbonate.* Chalk.
Chlorate of potash.	Chlorate of *potassium.*	*Potassium chlorate.*
Chloride of ammonium.	Chloride of ammonium.	*Ammonium chloride.*
Chloride of antimony.	Chloride of antimony.	*Antimony trichloride.* *Antimonious chloride.*
Chloride of barium.	Chloride of barium.	*Barium chloride.* *Baric chloride.*
Chloride of calcium.	Chloride of calcium.	*Calcium chloride.* *Calcic chloride.*
Chloride of gold.	*Per*chloride of gold.	*Auric chloride.*
Chloride of sodium.	Chloride of sodium.	*Sodium chloride.*
Chloride of tin.	*Stannous chloride.*	*Stannous chloride.*
Chloride of zinc.	Chloride of zinc.	*Zinc chloride.*
Chlorinated lime.	Chlorinated lime.	*Chloride of lime.*
Chlorinated soda.	Chlorinated soda.	*Chloride of soda.*
Chlorine.	Chlorine.	Chlorine.
Chloroform.	Chloroform.	*Methenyl chloride.* Chloroform.
Citrate of ammonia.	Citrate of *ammonium.*	*Ammonium citrate.*
Citrate of bismuth and ammonia.	Citrate of bismuth and *ammonium.*	*Bismuth ammonio-citrate.* *Ammonium and bismuthous citrate.*
Citrate of iron and ammonia.	Citrate of iron and *ammonium.*	*Ferric ammonio-citrate.* *Ferric and ammonium citrate.*
Citrate of iron and quinia.	Citrate of iron and quinia.	*Ferric quinio-citrate.* *Quinia ferri-citrate.* *Ferric and quinia citrate.*
Citrate of lithia.	Citrate of *lithium.*	*Lithium citrate.*
Citrate of potash.	Citrate of *potassium.*	*Potassium citrate.*
Citric acid.	Citric acid.	*Hydrogen citrate.* Citric acid.
Citro-tartrate of soda.	Citro-tartrate of *sodium.*	*Sodium citro-tartrate.*
Conia.	Conia.	Conia *or conine.*
Copper.	Copper.	Copper.
Corrosive sublimate (syn.)	Corrosive sublimate (syn.).	*Mercuric chloride.* Corrosive sublimate.
Digitalin.	Digitalin.	Digitalin.
Dried alum.	Dried alum.	Dried alum.
Dried carbonate of soda.	Dried carbonate of *sodium.*	Dried *sodium carbonate.*
Dried sulphate of iron.	Dried sulphate of iron.	Dried ferrous sulphate.
Ether.	Ether.	*Ethyl oxide.* Ether.
Ferryocyanide of potassium (syn.)	Ferrocyanide of potassium.	*Potassium ferrocyanide.*
Gallic acid.	Gallic acid.	*Hydrogen gallate.* Gallic acid.
Gelatine.	Gelatine.	Gelatin.
Glycerine.	Glycerine.	*Propenyl alcohol.* Glycerin.
Granulated sulphate of iron.	Granulated sulphate of iron.	Granulated *ferrous sulphate.*
Hydrated peroxide of iron.	*Peroxyhydrate of iron.*	*Ferric oxyhydrate.*
Hydrochlorate of morphia.	Hydrochlorate of morphia.	*Morphine hydrochlorate.*
Hydrochloric acid.	Hydrochloric acid.	*Hydrogen chloride.* *Chlorhydric acid.* Hydrochloric acid.
Hydrochloric sol. of arsenic.	Hydrochloric sol. of arsenic.	Hydrochloric sol. of arsenic.
Hydrocyanic acid.	Hydrocyanic acid.	*Hydrogen cyanide.* Hydrocyanic acid.
Hyposulphite of soda.	Hyposulphite of *sodium.*	*Sodium hyposulphite.*
Indigo.	Indigo.	Indigo.
Iodate of potash.	Iodate of *potassium.*	*Potassium iodate.*
Iodido of cadmium.	Iodide of cadmium.	*Cadmium iodide, or Cadmic iodide.*
Iodide of iron.	Iodide of iron.	*Ferrous iodide.*
Iodide of lead.	Iodide of lead.	*Lead iodide, or Plumbic iodide.*
Iodide of mercury, green.	Iodide of mercury, green.	*Mercurous iodide.*
Iodide of mercury, red.	Iodide of mercury, red.	*Mercuric iodide.*
Iodide of potassium.	Iodide of potassium.	*Potassium iodide.*

Iodide of sulphur.	Iodide of sulphur.	*Sulphur iodide.*
Iodine.	Iodine.	Iodine.
Iron.	Iron.	Iron.
Lime.	Lime.	*Calcium monoxide.* Lime.
Magnesia.	Magnesia.	*Magnesium oxide.* Magnesia.
Magnetic oxide of iron.	Magnetic *oxyhydrate* of iron.	*Ferroso-ferric oxyhydrates.*
Mercury.	Mercury.	Mercury.
Mercury with chalk.	Mercury with chalk.	Mercury with chalk.
Moist peroxide of iron.	Moist *perhydrate* of iron.	*Ferric hydrate.*
Nitrate of lead.	Nitrate of lead.	*Lead nitrate.*
Nitrate of mercury.	*Per*nitrate of mercury.	*Mercuric nitrate.*
Nitrate of potash.	Nitrate of *potassium.*	*Potassium nitrate.*
Nitrate of silver.	Nitrate of silver.	*Argentic nitrate.* *Silver nitrate.*
Nitrate of soda.	Nitrate of *sodium.*	*Sodium nitrate.*
Nitric acid.	Nitric acid.	*Hydrogen nitrate.* Nitric acid.
Nitro-hydrochloric acid.	Nitro-hydrochloric acid.	Nitro-hydrochloric acid.
Nitrous ether, spirit of.	Nitrous ether, spirit of.	*Ethyl nitrite, spirit of.* Nitrous ether, spirit of.
Oxalate of ammonia.	Oxalate of *ammonium.*	*Ammonium oxalate.*
Oxalate of cerium.	Oxalate of cerium.	*Cerous oxalate.*
Oxalic acid.	Oxalic acid.	*Hydrogen oxalate.* Oxalic acid.
Oxide of antimony.	Oxide of antimony.	*Antimony trioxide.* *Antimonious oxide.*
Oxide of iron, magnetic.	*Oxyhydrate* of iron, magnetic.	*Ferroso-ferric oxyhydrate.*
Oxide of lead.	Oxide of lead.	*Lead oxide, or Plumbic oxide.*
Oxide of mercury, red.	Oxide of mercury, red.	*Mercuric oxide.*
Oxide of silver.	Oxide of silver.	*Silver monoxide.* *Argentic oxide.*
Oxide of zinc.	Oxide of zinc.	*Zinc oxide.*
Perchloride of iron.	Perchloride of iron.	*Ferric chloride.*
Perchloride of mercury.	Perchloride of mercury.	*Mercuric chloride.*
Perchloride of platinum.	Perchloride of platinum.	*Platinum tetrachloride.* *Platinic chloride.*
Permanganate of potash.	Permanganate of *potassium.*	*Potassium permanganate.*
Pernitrate of iron.	Pernitrate of iron.	*Ferric nitrate.*
Peroxide of iron, hydrated.	*Peroxyhydrate of iron.*	*Ferric oxyhydrate.*
Peroxide of iron, moist.	*Perhydrate of iron, moist.*	*Ferric hydrate.*
Persulphate of iron.	Persulphate of iron.	*Ferric sulphate.*
Phenic acid (syn.)	Phenic acid (syn.)	*Hydrogen phenate.* Phenic acid.
Phosphate of ammonia.	Phosphate of *ammonium.*	*Ammonium phosphate.*
Phosphate of iron.	Phosphate of iron.	*Ferrous phosphate.*
Phosphate of lime.	Phosphate of *calcium.*	*Calcium orthophosphate.*
Phosphate of soda.	Phosphate of *sodium.*	*Disodiohydric phosphate.*
Phosphoric acid.	Phosphoric acid.	*Hydrogen phosphate.* Phosphoric acid.
Phosphorus.	Phosphorus.	Phosphorus.
Platinum.	Platinum.	Platinum.
Potash, solution of.	Potash, solution of.	Potash, solution of.
Prussiate of potash, red.	? Prussiate of *potassium,* red.	? *Red potassium prussiate.*
Prussiate of potash, yellow.	? Prussiate of *potassium,* yellow.	? *Yellow potassium prussiate.*
Reduced iron.	Reduced iron.	*Reduced iron.*
Santonin.	Santonin.	*Santonin.*
Slaked lime.	Slaked lime.	*Calcium hydrate.* Slaked lime.
Soda, solution of.	Soda, solution of.	Soda, solution of.
Starch.	Starch.	Starch.
Strychnia.	Strychnia.	Strychnine.
Subacetate of copper.	*Oxyacetate* of copper, (syn.)	*Cupric oxyacetate.*
Subacetate of lead.	*Oxyacetate* of lead (syn.)	*Basic lead acetate.* *Lead oxyacetate.*
Subchloride of mercury.	Subchloride of mercury.	*Mercurous chloride.*
Subnitrate of bismuth.	*Oxynitrate* of bismuth, (syn.)	*Basic bismuth nitrate.* *Bismuth oxynitrate.*
Sugar.	Sugar.	Sugar.
Sulphate of atropia.	Sulphate of atropia.	*Atropine sulphate.*
Sulphate of beberia.	Sulphate of beberia.	*Beberine sulphate.*
Sulphate of copper.	Sulphate of copper.	*Cupric sulphate.*
Sulphate of indigo.	Sulphate of indigo.	*Sulphindigotic acid.*
Sulphate of iron.	Sulphate of iron.	*Ferrous sulphate.*
Sulphate of lime.	Sulphate of *calcium.*	*Calcium sulphate.*
Sulphate of magnesia.	Sulphate of *magnesium.*	*Magnesium sulphate.*
Sulphate of mercury.	*Per*sulphate of mercury.	*Mercuric sulphate.*
Sulphate of potash.	Sulphate of *potassium.*	*Potassium sulphate.*
Sulphate of quinia.	Sulphate of quinia.	*Quinine sulphate.*
Sulphate of soda.	Sulphate of *sodium.*	*Sodium sulphate.*
Sulphate of zinc.	Sulphate of zinc.	*Zinc sulphate.* *Zincic sulphate.*
Sulphide of ammonium.	*Sulphydrate* of ammonium.	*Ammonium sulphydrate.*
Sulphide of iron.	Sulphide of iron.	*Ferrous sulphide.*
Sulphur.	Sulphur.	Sulphur.
Sulphurated antimony.	Sulphurated antimony.	*Antimonious oxysulphide.*
Sulphurated potash.	Sulphurated potash.	Sulphurated potash.
Sulphuretted hydrogen.	Sulphuretted hydrogen.	Sulphuretted hydrogen.
Sulphuric acid.	Sulphuric acid.	Sulphuric acid *Hydrogen sulphate.*
Sulphurous acid.	Sulphurous acid.	Sulphurous acid. *Hydrogen sulphite.*
Tannic acid.	*Tannin (syn.)*	*Tannin.*
Tartar emetic (syn.)	Tartar emetic (syn.)	Tartar emetic.
Tartarated antimony.	*Tartrate of antimony and potassium.*	*Potassio-antimonious tartrate.*
Tartarated iron.	*Tartrate of iron and potassium.*	*Potassio-ferric tartrate.*
Tartarated soda.	*Tartrate of sodium and potassium.*	*Potassio-sodium tartrate.*
Tartaric acid.	Tartaric acid.	Tartaric acid. *Hydrogen tartrate.*
Tartrate of potash.	Tartrate of *potassium.*	*Potassium tartrate.* *Dipotassic tartrate.*
Tin.	Tin.	Tin.
Valerianate of soda.	Valerianate of *sodium.*	*Sodium valerianate.*
Valerianate of zinc.	Valerianate of zinc.	*Zinc valerianate.*
Veratria.	Veratria.	Veratrine.
Verdigris.	Verdigris.	Verdigris.
Water.	Water.	Water.
Zinc.	Zinc.	Zinc.

Résumé.—The chief alterations in Pharmacopœial nomenclature now proposed amount to this, that the compounds of the alkali-metals and alkaline-earth-metals instead of being named as hitherto on two distinct systems, should follow but one:—that instead of salts of potassium and of potash we should have salts of potassium only; instead of sodium and soda compounds, sodium only; and so with preparations of ammonium, lithium, calcium, magnesium, and aluminium. This is a step in the direction of simplicity and permanency, and away from that of theory.

Synonyms.—Modern scientific chemical names, and the old dualistic names should, I think, be included as synonyms of the leading name in all Pharmacopœias. Many might be mentioned in addition to those in the third column: I have given a selection because the complete and consistent sets (for, unfortunately, there are more than one) would have occupied too much space.

Exceptional Alterations.—Constitutional objections to the name *acidum arseniosum* would be obviated by the old name *arsenicum album.* Some other bodies, apparently similar in constitution to white arsenic, are alluded to in the text of the British Pharmacopœia as *anhydrous acids*—a most ambiguous and self-contradictory term; for the bodies in question either are acids or they are not acids; whereas the term indicates that they are both—which is impossible. The not very satisfactory word "anhydride" is coming generally into use for these bodies, and this might be employed officially; but all objection would be avoided if the strength of the Pharmacopœial acids, which are mostly aqueous solutions of acids, were solely given in terms of real acid (the hydrogen salt). The correlative of the word *anhydrous,* I would suggest, should be *hydrous,* never *hydrate;* especially as the latter word is now given to the members of a class of bodies derived from water, as *hydrate of potassium,* and not to bodies containing water. The compound from which *anhydrous sulphate of copper* is prepared is *hydrous sulphate of copper,* not *hydrated sulphate of copper.* In view of the peculiar composition of *bichromate of potassium* the first word of its name is most unsuitable, and would be advantageously replaced by *red chromate,* a name which would usefully distinguish the salt from *yellow chromate of potassium.* The names of the bismuth powders are not at present consistent with each other; if the one be termed *subnitrate* the other should be *subcarbonate,* not "*carbonate.*" But these preparations and the similar compounds of copper and lead are normal rather than "sub" salts, containing oxygen in the place of an exactly equivalent quantity of the acidulous radical of the neutral salts, and might well be termed respectively *oxycarbonate of bismuth, oxynitrate of bismuth, oxyacetate of copper, oxyacetate of lead;* at all events the latter names would do good service as synonyms. Similar remarks apply to the *peroxhydrates of iron.* The prefix "sub" is most usefully and indeed indispensably applied in the case of calomel, which is the "lower" or under-chloride of mercury: it would be well if the meaning of the syllable could be always thus restricted to its etymological signification, and never again used in its old conventional sense. The names *tartarated antimony, tartarated iron, tartarated sodium,* I do not like at all. The sister terms *sulphurated antimony,* and *sulphurated potash* are most happy, their utter vagueness fairly representing the nondescript character of the preparations. But *tartrate* (or *oxytartrate*) *of antimony and potassium, tartrate of iron and potassium,* and *tartrate of sodium and potassium,* are at least as definite in composition as the citric trio which are already honoured with the definite names (or, rather, with the old forms of the names) *citrate of bismuth and ammonium, citrate of iron and ammonium* and *citrate of iron and quinia.* "Prussiates" might now, I think, be relegated to the synonymic category.

Instead of *Liquor Sodæ Effervescens*, B.P., which might possibly be confounded with *Liquor Sodæ*, I would prefer *Aqua Sodæ Effervescens*, and so with *Potash Water*. These are the prominent exceptional alterations to which I would draw attention. Their acceptance is not insisted on, nor is the list exhaustive. Allusion is made to them in the hope that discussion may show which names, on the whole, possess the greatest number of advantages. The alterations I do urge are those considered in the main portion of this paper, those of which I have already given a *résumé*.

In conclusion, I would state that the Lavoisierian names now proposed for use in medicine and pharmacy have already been freely adopted by many authors, and used as the leading nomenclature of my own and some other Manuals of Chemistry. I commend them to the medical practitioners and pharmacists of Europe, America and the Colonies.

The PRESIDENT, expressing his sense of the important character of Prof. Attfield's paper, remarked that one point in it (leaving the discussion of its chemical value to such gentlemen as Professors Frankland and Odling, whom he saw present) was worthy of the best consideration of pharmacists, namely, the importance insisted on by the lecturer of having such a system of nomenclature as should admit of no error between the prescriber and dispenser.

DR. FRANKLAND expressed his coincidence, on the whole, with the views advanced by Dr. Attfield. He said the scientific chemist was frequently compelled to modify the nomenclature of chemical substances, in order to explain his processes and theories; but for a Pharmacopœia the most important point was that the names should individualise the substances. He noticed one or two inconsistencies in Dr. Attfield's list of proposed names; one that he proposed to leave the name sulphate of iron to distinguish the ferrous sulphate. To take, also, the first name on the list, acetate of ammonium. The termination here had been changed, but a little further down he found acetate of morphia, which was a corresponding salt. He asked if it would be possible to change this name to *morphium*. Or at least the indefinite termination *ine* might be maintained. Practically it was of but little moment, for physicians would doubtless continue to avoid the terminations, whatever they might be. He (Dr. Frankland) thought that with but very few changes Dr. Attfield's scheme was well calculated to harmonize the nomenclature of the Pharmacopœia with the present condition of science, and that it would make but a very inappreciable difference to those who had to employ the names in medicine.

Dr. REDWOOD remarked that in every new Pharmacopœia change of nomenclature had to be made, the object generally having been to assimilate the names to scientific heories. In the last Pharmacopœia some changes had been made with this object, and others with the view of rendering he names more specific. In a future Pharmacopœia he had ittle doubt that a still greater change of nomenclature would be required. But there was no immediate intention f producing a new Pharmacopœia, and the present one would probably last for another ten years. If a ew one were now in preparation he (Dr. Redwood) would be an advocate for exactly such changes as Dr. ttfield had proposed. The changes were so simple, and yet o perfectly in accordance with modern chemistry, that it ould be hardly possible for any Pharmacopœia committee o reject them. He also agreed with Dr. Frankland hat the termination of the alkaloids should be *ine* instead *ia*, as in the case of morphia, strychnia, and others. r. Frankland had mentioned that the term sulphate of on was not sufficiently distinct, there being two substances that name. He (Dr. Redwood) considered that it was uite sufficient in such a case for the more unusual salt only be distinguished, which was done at present. It would ly be more troublesome to use the affix *proto* to the sul-hate of iron, and would serve no purpose. He could not ree with Dr. Attfield's proposition to substitute white senic for arsenious acid. Dr. Attfield had proposed at the term *acid* should not be employed for substances hich did not contain hydrogen. If this were the only stance, it might be allowed to pass. But there were her cases, as for instance, chromic acid. Ought we to ange this for chromic anhydride? He was not prepared advocate such a cumbrous nomenclature. He quite reed that red chromate of potash would be a good substitute for the present name. For the sake of brevity he would advocate the retention of the name black antimony, not giving it the title which Dr. Attfield had suggested, namely, black sulphide of antimony. He would not care to see the name carbonate of bismuth altered to oxycarbonate of bismuth as now proposed. Carbonate of lead and other salts were just as objectionable, these being quite as certainly oxycarbonates. To change the names of the double salts now named tartarated iron, tartarated antimony, and tartarated soda, to the suggested names tartarate of iron and potassium, and so on, would not, he thought, be an advantage. He would like to see the names changed, but not to what was now suggested. Why not return to the old names of potassio-tartrate of iron, etc., and use also the old term ammonio-citrate of iron? With regard to the salt citrate of iron and quinine, he would suggest ferro-citrate of quinine as an expressive and simple title.

Dr. ODLING thought Dr. Attfield's proposed scheme of great importance. He could hardly coincide with Dr. Redwood respecting the value of such a discussion. Presuming that ten years was, as Dr. Redwood had said, the average duration of life for a Pharmacopœia, and considering that the present one was of exceptional excellence, allowing it ten years from now, he could not think that it was any too early to commence the discussion of any changes in the nomenclature. He would have commented on Dr. Redwood's criticism of the proposed term *white arsenic*, but he thought that after the glowing eulogium which Dr. Redwood had himself passed on *black antimony* almost immediately afterwards, he (Dr. Odling) might leave the two to balance each other. He fully agreed that names including the use of Latin and Greek numerals should be avoided as much as possible. To distinguish substances by naming their colour was an excellent means of definition, for while it involved no theory, it possessed the strongest probability of being a description which might be expected to be permanent. He also concurred with Dr. Attfield's remarks concerning acids. It was not originally of much importance to which class of bodies the term acid should be applied, but as general consent had given it to those which were compounds of hydrogen, he thought it of some importance that it should be retained for them. Bodies similarly described should possess similarity of character. He (Dr. Odling) did not exactly agree with Dr. Attfield's sketch of the history of the origin of the binary nomenclature of salts. He was aware that the theory might be found in some of Lavoisier's writings, but he hardly thought it had been recognised by him. He instanced many terms used by Lavoisier, which seemed to indicate that he had not formed any such theory. And he believed that it was not until the time of Davy that it was fully expressed. In a few cases he thought Dr. Attfield had striven a little too earnestly to attain exact scientific accuracy, which he (Dr. Odling) could not think was required. He coincided with Dr. Redwood in many of his remarks on this point. He agreed that the name sulphate of iron was quite sufficiently distinctive. The same argument, however, would not apply with regard to calomel and corrosive sublimate. It was important that sub-chlor. and per-chlor. should be designated. He concluded with a few words on suffixes and prefixes. In a scientific sense he preferred the adoption of suffixes, but he could not but admit the force of the arguments advanced for distinguishing chemical substances used in medicine by prefixing the syllable. This was necessary as long as physicians would perversely adhere to their system of abbreviating words.

Dr. QUAIN being called upon by the President, said he had not come to speak but to learn; he had not been disappointed. He had come also as a conservative, to protest against any changes of the names of medicinal substances merely to meet the views of scientific chemists; but the scheme proposed, he was glad to find, was the reverse of this. It was impossible for practical physicians to follow minutely the theories of scientific chemists, and they had the strongest possible objection to any violent changes of nomenclature. He thought the present Pharmacopœia so exceedingly good that he anticipated for it a long existence.

Mr. T. B. GROVES made one remark on the danger often arising from the similarity between the abbreviated forms of the names acid. hydrochloric. dil., and acid. hydrocyanic. dil., and suggested a return to the old name for the latter of acidum prussicum.

Dr. **Redwood** thought the effect of this would be to terrify patients.

Dr. **Attfield** very briefly replied, expressing his appreciation of the consideration which had been given to his suggestions.

THE BOTANICAL STUDENT'S DREAM.

" Ridentem dicere verum
Quid vetat?"

It was the middle of February, and I hope to pass the Minor Examination in May. I had devoted my winter evenings to botany, and was endeavouring to create out of Bentley and my own inner consciousness a correct idea of a plant. It was my off-duty night, and, after a good spell of reading, I found that my notions, instead of clearing up, became more and more confused and complicated. Suddenly it came into my head that I was a primordial utricle, and how to get out of my cell, notwithstanding its walls were but cellulose, was more than I could accomplish. But no, that was not it; a painful sensation across the chest made it evident that I was a cell myself, and that the hour-glass constrictive, preparatory to a division into two cells, was taking place. Though painful, this did not otherwise distress me, when I heard a rushing noise—(was it a cytoblast?)—and, presto! the perfect image of my thoughts,—my ideal plant was full in view before me. Alas! what a Frankenstein had I brought to life, or to death in life! No ol oak wild and gnarled, worn with the storms of five hundred winters, ever looked so weird and ghostly to the belated traveller as he passed it in the thickening twilight as did my unfortunate creation. Its arms were stretched out as if to seize upon its author, but the cell division being now completed, I slid easily out of the way. I saw what a frightful abortion I had produced. Was it an exogen with the wrong side out, or an endogen with the wrong side in? The fibro-vascular bundles were rattling loose like old bones, and the bark of the trunk, where there was any, was altogether unlike bark. Surely the liber must have got outside the epidermis, owing to its being made out of a book. The petioles were at the wrong ends of the leaves, and the peduncles had no work to do. The lacteals were leaky, and my nose assured me they were distilling assafœtida; but if so, why were they in the stem? The conversion of the elements of leaves into flowers was going on badly; some had got as far as stamens, and were intended to be hypogynous when the ovary arrived. The process had followed the too frequent example of higher organizations, and become a case of cryptogamy. There were old carpels hanging about, which ought to have dehisced long ago,—septicidally probably, suicidally most likely. The seeds were all loose, so I supposed the dissepiments did not fit, or the placentation was not correct. There were spines in abundance,—naturally enough in this case, for the development of the leaf-buds had proceeded upon false principles. Involucres, bracts, spathes and glumes were stuck about here and there, looking as out of place as bills upon a lamp-post.

One thought pleased me at last—the roots were hidden out of sight. Consequently, whether they were true roots or adventitious I did not care; whether rachis or underground stem, whether bulb, corm or tuber, it mattered not; and, as long as my own medulla was safe, it was a toss up whether there should be any in the root or not.

To complete my confusion, I now saw approach the venerable but slightly aquiline form of the examiner in botany, and on his coming the miserable spectre I had raised fell to pieces like a disarticulated skeleton. He saw my embarrassment, and, picking up one of the fragments, asked me, in a gentle voice, " What is *prosenchyma?* I hesitated. I, who had been using it—alas! too freely, from a book mind, as I afterwards remembered. I was brimful of hard and uncomfortable words as good companions to each other as teasel heads or thorn-apples, which nevertheless kept shifting about as in a kaleidoscope; but this one *would not* come into the field of view. I answered at a venture, "*Protoplasm.*" He gave me just one look, stern but full of pity, and the expected collapse took place.

It might have been a few minutes or a few hours afterwards that I saw a graceful maiden, with a golden glory round her head, walking towards me. "Youthful student," she said, "I know your troubles, and am come to help you. My name is Clytie. The sun whom I follow has risen, and I will take you to the fields where grow the anemones and primroses and the yellow daffodils. We will follow his course till night, and before he sets you will learn more of the glories of flower-land than books will ever teach you." So we went forth with the sun, and picked the earliest blossoms wet with dew. As he got high others unfolded, and the green leaves overhead and the grass below, the leafy hedgerows and mossy banks, all had something to tell and something that could be remembered. And the bees entered the flowers, to show us where were the nectaries, and got covered with pollen-grains, till they were as dusty as millers. We saw, too, the colchicum leaves, like bundles of spearheads, in the meadows; and the feathery hemlock, with its livid stems, lurking by the hedges; the viscid henbane on the chalky upland; the dark green belladonna; the dandelion, despised among herbs yet honoured pharmaceutically, its seed-heads a botanical study; the tall foxglove, with its cups for the fairy folk; and the malefern, with its crown of unfolding fronds, a model of graceful beauty: and the sycamore seeds springing up in the shade where grass did not grow, taught the secret of cotyledons, and other lessons were quickly learned. And the odours were crushed out under foot,—the allium, fine but somewhat high; the wild thyme, fresh and sweet; whilst the scent of the anthoxanthum, sweetest in death, was borne far away down the wind. And so on, as the sun westered, the world of flowers had acquired a new meaning; and my spoils grew heavy, and—but the fate that befalls walking philosophers and star-gazers in general befell me. Whether it was a stump or a bramble I do not know, but my forehead came into sharp contact with—the ground, I was about to say; but no, it was the corner of that " Bentley " lying on the table. And so I awoke.

Moral.

If you want to learn botany, do not begin by studying an advanced work on the subject, and by cramming yourself with names and details that, if you have a good memory, may enable you to pass your examination, but which, unless you have struck the keynote of your work, will very probably be soon afterwards forgotten, or reduced to the state of jumble portrayed above.

Instead of this, provide yourself with a pocket lens and a sharp penknife; take an early walk into the country, and bring back a few common flowers, pulling them up by the roots. A buttercup will do excellently well to begin with, as it is a representative of the first Natural Order, and is a good plant to work upon. Examine it carefully by the aid of a simple elementary work, such as Oliver's "Lessons in Botany,"—a cheap book,—and by the time you have got through a few common plants and a few chapters of your book, you will begin to take an interest in your subject, and will be glad to turn to the pages of " Bentley " for further and necessary knowledge,—a book which, if taken up first-hand is " worse than Greek " to many. By pursuing this course, you will be learning at the same time both systematic and structural botany, and, as far as the mere examination goes, you will gladden the heart of your examiner by showing him that you practically understand your subject, and that, even if your knowledge be limited it is sound. Beyond this, however, and what is of far more importance, you will obtain some real insight into botany which will not be merely ornamental, but will be of direc personal utility as long as you follow the pharmaceutica profession.

William Southall.

CONTINENTAL CHEMISTS.—IV.

NORTH GERMANY.

Just two years ago it was the first time that my fee trod upon London pavement, and on the evening o my arrival I boldly took a stroll in the streets of vas London. Near London-bridge my eyes were suddenl caught by a brilliant light streaming forth from a splendi window with beautiful show-bottles and gas-burners behind it was the tastefully-decorated shop-window of a chemist.

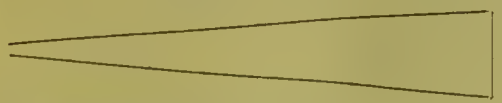
I vividly remember that first sight of an English chemist's shop, when, having returned to Germany, the other evening I went through the streets of a large German town and was hardly able to find out the shop, a friend of mine had designated to me. There was no window with plate-glass panes, filled with nice smelling-bottles, perfumes, and soaps; show-cards too, and all the manifold articles exposed to view in the window of an English chemist's shop, and glittering in an abundance of gas-light, were absent. Just as little of a show is to be found within the shop. In fact, the North German chemist does not condescend to employ means to attract the attention of the public; he thinks it below his dignity. This is characteristic for him, and at the same time marks the position he occupies with regard to commercial matters. He is, as a rule, no acute business-man, but essentially conservative in his business affairs. Produced, is this, mainly by the limitation of the pharmaceutical trade, in consequence of which, the public, for its want of medicines and physic, is assigned to a few chemists, and the latter are therefore saved the trouble to entice the public in any way.

The shop, not always large, shows a counter without show-boxes, one or two scales on it, and is in large places often elegantly worked, and sometimes covered by a marble-plate. The dispensing counter is separated, and contains those tinctures, extracts, chemicals, ointments, and powders, which are mostly used in dispensing, and the necessary utensils. Poisons are not kept on the dispensing counter. Against the walls are shelves filled with bottles and porcelain jars (general height 8-in., diameter 3-in.). The signatures are either burnt in or written on with oil-colour and varnished, paper labels of any sort are strictly forbidden. Below the shelves are numerous boxes containing different plasters, roots, and herbs, which are much more in use here than in England. For powders, ointments, and pills, special mortars are required; for remedies with a strong smell as assafœtida and moschus, mortars are used exclusively destined for them, and properly labelled. The same applies to arsenic and corrosive sublimate; for the latter a special and duly labelled pill-machine has to be provided, which contains always thirty canals, instead of twenty-four, as is usual in England.

Every shop contains a few chairs for the public waiting for medicines, but by no means is it allowed to sit close to the counter, but some distance from it. In some districts, as Mecklenburg, Silesia, the chemists' shops have no doors opening towards the streets; customers have to pass through a kind of hall before reaching the shop itself. In Breslau business is transacted through a large window, people standing outside in the streets, and only customers coming for medicines enter the shop; although they often enough prefer waiting in the hall.

Prescriptions are generally handed back, only few establishments are in the habit of copying them. Prescriptions containing emetics, sublimate pills, strychnine, atropine, etc., are not allowed to be dispensed a second time without being again signed by the physician; they are always written in Latin language, the directions in German.

The labels in use are not square, but long ones, of this shape—



Those are attached to the neck of the bottle by some twine. For internal medicines white, for external medicines red or blue labels are used. A special "shake the bottle" label is not added. Has the physician omitted (as often occurs) to give the necessary instruction in the direction, the chemist is bound to supply all needed information verbally. In dispensing he has carefully to observe that the medical man does not overstep the legal maximal doses, in which case he has to send back the prescription to the physician, in order to get the dose lowered or the sign ! added behind the name of the respective remedy. This proceeding the chemist has not to communicate to the patient. Overlooks he such an overstepping of doses, for all consequences arising out of it he alone is answerable. Makes an apprentice or assistant a mistake, the head of the establishment is answerable too.

The system of weights is the French, introduced in Prussia since 1868. In prescriptions written according to the old system, the chemist has to put down the corresponding weight in grammes; for the correctness of the figures he is responsible. To use measures in dispensing is strictly forbidden.

The marked square bottles, so convenient for the patient to measure out his dose, and so much in use in England, are not found in North German businesses. Explained is this by the custom of our medical men not to prescribe 4, 6, or 8 ounce mixtures exactly, but to the active agent and syrup they order to be added 4, 6, or 8 ounces of water, besides tincture, etc. The bottles are round-shaped, either half white or white. Some leading houses have the names of their firms on the bottles, but by no means are the latter to be charged higher than the common white bottles. No peculiar-shaped or corrugated bottles are used for external medicines, nor are they in any way different from those used for internal medicines, except by the label, nor are bottles of that kind required for the keeping of poisons.

Has a physician omitted on a prescription to fix the quantity of any remedy, but has left it to the good sense of the chemist, for example, the quantity of extract, mucilage, or soap required for the making of a certain number of pills, this quantity has to be clearly marked, to insure uniformness; likewise whether a white or half-white bottle, earthen or porcelain jar, with or without wood cover, has been given; all these particulars, as well as the charge, has to be put down on the prescription.

Till a few years ago there existed half a dozen different Pharmacopœias in North-Germany, of which the Hessian and Hanovarian, issued 1861, were written in the German language, and declared by Dr. Hager, in Berlin, to be miserable works. The events of the year 1866 put an end to their existence; since the annexation the Prussian Pharmacopœia, issued 1862, with Latin text, has been introduced in these provinces. Annexed to the Pharmacopœia is a table containing the specific gravities of officinal liquids at different temperatures, ranging from 12-25 degrees C. (53·6—77 degrees F.) Another table shows the maximal doses, for one dose, and for twenty-four hours, which the physician is not allowed to overstep without adding the sign ! Then a table of those remedies which are to be kept apart from the others, aud the table of deadly poisons (Venena directa). Certain remedies, as Argentum nitricum, Zincum sulfuricum, Opium, Nux vomica, Kalium iodatum, Calomel, Rhizoma veratri, Tubera aconiti, and narcotic extracts, and herbs are to be kept in boxes or bottles, labelled in a different manner from the others: generally white letters on a black ground, and three crosses painted on. These drugs and chemicals may find their places near the dispensing counter, but never on it, and always in a locked cupboard.

Arsenicum, Hydrarg. bichloratum, Acidum hydrocyanicum, Oleum amygd. æthereum, Strychnine, Coniin, etc., are not to be kept in the shop itself, but in a room adjoining it, in such a manner that two doors have to be opened before one can get to the poisons. As soon as one of these remedies has been used it must immediately be carried back and locked in again. Annoying as that is, the rule is strictly adhered to.

The same precautions apply to the storing of the larger stocks of poisons. The poison cupboard also contains two mortars labelled "Poison," two scales, weights, spoons, and a towel.

For phosphorus a special place in the cellar has to be provided.

At the inspections special care is taken to ascertain that all regulations relating to poisons are observed. These inspections take place every three years, and are performed by a Government medical officer and a chemist. The officer looks that all the remedies are in store in sufficient quantities, properly kept, the laboratory well fitted with apparatus (analytical scale and microscope being indispensable), that the principal possesses a good pharmaceutical library not deficient in new works, and examines apprentices and assistants, except those who have passed the major examination. While this is going on the chemist analyzes the chemicals on their purity, proves the quality of the drugs, whether opium and cinchona barks contain the prescribed quantity of alkaloids, the extracts free of copper and proper consistence, waters and tinctures clear, takes the specific gravities, etc. Those inspections generally last two days, and a protocol is taken of all the proceedings, signed by the parties concerned and a town officer.

It is a matter of some importance for the chemist to learn the time when his business is to be inspected. No official notice of course is given, but in some way or the other he in most cases succeeds in gaining information some twenty-four hours before, so that he finds time to put the premises in show order. This is necessary, even in the best conducted establishment; for the Government regulations are not always compatible with the exigencies of business. The Government forbids to keep solutions of salts and extracts for dispensing purposes; what establishment could do without them? White and red mercury ointment, iodide of potash ointment shall always be fresh made; but they are largely asked for by the public in small quantities, in consequence of which a little store of them must be kept. Still, all these things have to be carefully hidden from the searching eyes of the inspectors. If they are found it is the duty of the officers to blame the chemist, and report him to the Government for conducting his business contrary to the regulations given by the superior wisdom of the Medical Department.

It is a matter of regret that the North German chemist so easily submits to every kind of orders interfering seriously with his own affairs; even the "Norddeutsche-Apotheker-Verein" does not deign to take up such matters and show activity in removing trade grievances. As a further example of indifference it may be stated that Mecklenburg, although entirely surrounded by Prussian provinces, still retains the *old* Hanoverian Pharmacopœia of 1833, and there are no efforts made on any side to get rid of this rather antiquated work.

Regarding the returns of the about 13,000 businesses of North Germany, they vary from 1,200 to 15,000 thalers (£180-2,250).[*] Larger returns are very rare. The price of a business, inclusive of premises (if not exceptionally large), is six to seven times the returns. After this principle sales have been effected since many years and up to the present time. In an opulent country district a business returning 6,000 thalers (£900) was sold for 42,000 thalers (£6,300).[†] A house-agent valued the premises, if sold under ordinary circumstances, at 6,000 thalers (£900), the stock, fixtures, etc., at a very fair estimate, would be worth 4,000 thalers (£600); altogether £1,500. In Breslau, a business returning 11,000 thalers (£1,650), house, two window-fronts, was sold for 70,000 thalers (£10,500); average number of prescriptions per day 75. Capital required is generally one-third or one-fourth of the price.

Ten thousand inhabitants are thought necessary to support a chemist's business, and this rule is, upon the whole, kept up, although exceptions are not wanting, *e.g.*, in my present place, a town of 3,600 inhabitants, are two chemists' businesses. Berlin, with 730,000 inhabitants, contains 58, Breslau, population over 200,000, contains 18; in some country districts belong 14,000 and even 17,000 inhabitants to one business. When in a town or village the necessity of getting a chemist's business established becomes evident, the Government requests qualified chemists, who are not, or have not already been in possession of a business, to compete for the licence, and send in their testimonials. The decision depends upon good scientific qualification, time of serving, and possession of the required capital. There is generally a sharp competition, and in spite of all laws and orders, favour and connection very frequently play a prominent part in the proceedings, for the granting of such a licence, which is given gratuitously, is, at the present market value of chemists' businesses, as good as a large gift of money. In a certain district a licence was granted, the costs of house building, fitting up of shop and laboratory were 8,000 thalers (£1,200), the business soon returned 3,500 thalers (£525), the proprietor fixed his price at 22,000 thalers (£3,300); average number of prescriptions per day 21. In Breslau a house was bought and everything put in order at a cost of 30,000 thalers (£4,500); after several years it was sold for 70,000 thalers (£10,500). In these transactions the Government never interferes.

The prices of the various drugs and chemicals are fixed every year by the Government; the prices of those remedies not contained in the Pharmacopœia, but still in use among medical men, are calculated by Messrs. Schacht and Lau, in Berlin, and although they have not the same legal authorisation as those issued by the medical department, they have been adopted by the whole trade throughout North Germany. As to the manner of charging prescriptions, the following examples will best illustrate it:—

(Original prescription.)

Rec.
Infus. rad. ipecacuanh. 0·72—180·0 grammmes.
Natr. bicarbonic. . 4·0
Syrup. althææ . . 30·0

(Chemist's marks.)
vitr. viride.

Rad. ipecacuanhæ		5 pfennige.
Natr. bicarbonic		4 ,,
Syrup althææ .	1 silbergroschen	3 ,,
Making infusion .	2 ,,	6 ,,
Dissolving salt .	1 ,,	6 ,,
Four weighings .	1 ,,	0 ,,
Half white bottle .	1 ,,	9 ,,
	8 silbergroschen	9 pfennige.

The price being under ten silbergroschen is in this case advanced to nine silbergroschen. The same prescription dispensed in Mecklenburg would be charged—

Rad. ipecacuanhæ .	1 silbergroschen	3 pfennige.
Natr. bicarbonic		9 ,,
Syrup althææ .	3 ,,	0 ,,
Infusion . .	2 ,,	3 ,,
Dissolving . .	1 ,,	9 ,,
Bottle . .	3 ,,	6 ,,
	12 silbergroschen	6 pfennige

One shilling is equal to 16 silbergroschen Mecklenburg.

Rec.
Hydrat. chlorali 2·0
Aq. destillat.
Syrup cort. aurant. āā 7·5

Hydrat. chlorali .	1 silbergroschen	4 pfennige.
Aq. destillat		3 ,,
Syrup cort. aurant.		9 ,,
Dissolving . .	1 ,,	6 ,,
Three weighings . . .		9 ,,
White bottle .	1 ,,	9 ,,
	6 silbergroschen	4 pfennige.

Advanced to 6 silbergroschen 6 pfennige.

Rec.
Hydrargyr. chlorat. mit.
Pulv. rad. ipecacuanhæ āā 0·3
Opii puri 0·15
Sachar. alb. 8·0

Divide in partes equales 15.

Hydrargyr. chlorat.		3 pfennige.
Pulv. rad. ipecacuanhæ . . .		3 ,,
Opii purif.		6 ,,
Sacchar. alb.		8 ,,
Four weighings .	1 silbergroschen	0 ,,
Mixing the ingredients . . .		8 ,,
Dividing . .	5 ,,	0 ,,
Box for the powders	1 ,,	6 ,,
	9 silbergroschen	10 pfennige.

Advanced to 10 silbergroschen.

Rec.
Iod. 1·2.
Kalii iodati, 2·5
Ungt. simpl. 15·0

Iod. . . .	1 silbergroschen	0 pfennige.
Kalii iodati . .	2 . . .	6 ,,
Ungt. simpl. . .	3 . . .	0 ,,
Water for dissolving kalium iodat.		3 ,,
Three weighings		9 ,,
Mixing . .	1 ,,	0
White jar . .	1 ,,	4 ,,
	9 silbergroschen	10 pfennige.

Advanced to 10 silbergroschen.

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[*] A thaler is equal to about 3s. of our own money. The following table will aid the reader in the remarks that follow:—12 pfennige = 1 silbergroschen; 30 silbergroschen = 1 thaler. Thus it will be seen that 10 silbergroschen are equivalent to 1s. English money.

[†] The figures quoted here are based on facts.

Rec.
Ferri lactis
Ext. gentianæ āā 4·0
Fiat pilul. 60

Ferri lactis . .	1 silbergroschen	
Ext. gentianæ .	1 ,,	8 pfennige.
Two weighings		6 ,,
Volv. *c. pulv. cinnam.*		
Mucil. gum. for forming pills . .		3 ,,
For beating the mass	1 ,,	0 ,,
For forming of 60 pills	2 ,,	0 ,,
Box . . .	1 ,,	0 ,,
	—	—
	7 silbergroschen	5 pfennige.

Advanced to 7 silbergroschen 6 pfennige

Should the charge for a prescription exceed 10 silbergroschen, it is to be reduced. For instance, a charge of 10 silbergroschen 5 pfennige, is reduced to 10 silbergroschen, and 10 silbergroschen 11 pfennige, to 10 silbergroschen 6 pfennige.

Till the year 1862 the chemists were bound to manufacture their preparations and chemicals in their own laboratory, but this order, since a long series of years, could not be obeyed, and became quite insignificant. When the new Pharmacopœia was issued in 1862, that order was abolished, and the chemist may now buy everything, but he is always responsible for the purity of the preparations. At the same time, the official regulation-prices were considerably reduced. It would, however, be a great error to suppose that laboratory-work has been abandoned by the North German pharmacists. It still forms an important branch of his occupation, and the apprentice has to be instructed in it.

At present very few young men enter the Pharmaceutical profession, and in consequence, the chemist generally takes an apprentice without premium. An examination before entering is not required, but he must show proof of possessing sufficient education to entitle him to the privilege of *one* year's service in the army. That is to say, besides German grammar and style, he has to possess a good knowledge of Latin, French, English, decimal fractions, general history, the elements of physics and chemistry, and some botany. The term of apprenticeship in this case will be three years, if possessing a higher education it will be lessened. The principal has to instruct the apprentice, allow time for self-study, and supply him with books; once a year a medical officer calls in and takes notice of his progress in pharmaceutical sciences.

The Assistant Examinations are not held in a central place, but may take place in any town where a Government physician resides; this latter and two chemists form the examining body. The examination comprises translation of several Pharmacopœia articles, reading, and making up of prescriptions, knowledge of the mother-plants of the various herbs, roots, and drugs, their natural orders, some of them he has to characterize, properties, and manufacture of the Pharmacopœia chemicals, explanation of several chemical processes, knowledge of the maximal doses, and laws referring to the sale of poisons. Having passed, he has, at least, to serve three years before he is allowed to hear lectures at a university, and then has to do this for one and a half year. Has he served four years or more, one year's study will be thought sufficient. Having gone successfully through this very severe examination, he is declared able to conduct a business or may buy one, supposing he has enough money.

The salary for an assistant just having finished his apprenticeship, is, besides board and lodging, 150 thalers (£22 10s.), for one with several years' experience, 200 thalers (£30), for one having passed the major examination, 220 to 240 thalers (£33 to £36).

Fifteen years ago, salaries were much smaller, but owing to the present great want of assistants, they were risen about 33 per cent.

The business hours are in summer from 6 a.m. to 10 p.m., winter from 7 a.m. to 10 p.m. No closing on Sundays.

As regards the social position of the chemist, it is pretty much the same as in England. He is the confidential adviser of the public in all technical affairs, and is expected to give information on almost every subject gratuitously. In smaller places he is a favourite person for town offices. The position towards the physician is very simple; the medical man prescribes, the chemist dispenses.

Such trades as grocery, colours, etc., are rarely connected with a chemist's business; but the manufacture of soda and artificial mineral waters is almost entirely in the hands of chemists. Those beautiful American fountains are little known in North Germany. It is not allowed to put up fountains for the retailing of soda-water in tumblers within the shop itself. This latter has to be carried on by a separate staff and in separate premises. In several large cities chemists have erected nice little stalls in the streets, where soda-water is retailed at a trifle over ½d. per tumbler, without, and 1d. with fruit syrup. Perfumes and soaps, as already mentioned, are only kept to a small extent; the same applies to the manifold articles comprised under the name "druggists' sundries;" indeed, Messrs. Maw and Son would have very little business to transact with the North German chemist.

Against "patent medicines" or anything similar a strong dislike is shown, which sometimes takes the wrong direction. About twelve years ago one Mr. Bashin offered, as commission article, a white cod-liver oil, filled in bottles, put up in the patent style. The whole trade (some of our pharmaceutical journals too) made a strong opposition against it. Other traders took the new article in; by-and-by the chemists found themselves compelled to take notice of that horrible innovation, and white cod-liver oil is now kept in every shop, and supplied by the wholesale houses. A similar opposition, with the same result, was shown against homœopathic medicines. Elegant pharmacy is practised only in large cities, and limited to high-class customers: on neatly wrapping in bottles and tying parcels, not so much care is bestowed as in England.

As to pharmaceutical societies, there exist, besides the Norddeutsche-Apotheke-Verein, founded fifty years ago, a number of provincial associations, the members of which are not very numerous. From all these societies assistants, even those who have passed the Major Examination, are excluded.

UNITED STATES.

(FROM OUR OWN CORRESPONDENT.)

New York, April 3.

THE Legislature of the State of New York at Albany has passed the Act, mentioned in my last letter, in reference to licensing the drug clerks of the city of New York, and it is now a law of the State.

Some amendments were made to the Act previous to its passage, but it remains substantially the same in its provisions as described. The licensing board is to be appointed by the mayor of the city of New York, and their salaries, which will doubtless be liberal, as salaries of city officials usually are here, are to be fixed, and provided for by the supervisors of the city and county of New York, who have the local finances in charge.

The position of member of the licensing board will be a very snug thing, paying probably six or eight hundred pounds per annum. The board is to consist of two physicians, two pharmaceutists, and two chemists; physicians *with a diploma* are not lacking with us, pharmacists are not plenty, but I presume a couple can be found of proper democratic sympathies to suit the ideas of his Honour. I am curious to see the mayor's idea of pharmaceutists, as evidenced by his selection of these representative men. Of pharmaceutists, strictly speaking, we have only a small group; the members of the American Pharmaceutical Association, a body exceedingly limited in numbers, and representing only a fractional part of the chemists and druggists, lay more claim to this denomination than the vulgar thousands who have not yet been admitted within the pale of their highly dignified body.

Some of the retail druggists, as the chemists are called, have, during the last few years taken up the title of pharmaceutists, a very few call themselves pharmacists; these are they who do the elegant pharmacy which I notice has attracted your attention in England. They mostly excel in the composition of harmless mixtures of agreeable taste, for a class of customers fond of dosing, and desirous of doing so in a high-toned way, regardless of expense. Pharmaceutist looks better over the door or on a label, and quite throws in the shade the old-fashioned drug store in the other corner. It is doubtful if the American Pharmaceutical Association is responsible for all of these newly-fledged pharmacists. I suspect they have in a majority of instances re-christened themselves.

As for the two remaining members of the board, they are to be chemists, which, with us, signifies analytical chemists, not by any means apothecaries, or even pharmaceutists. Of these we have some good examples in America; locally one of the most shining lights is Dr. R. Ogden Doremus, who, in addition to his scientific qualifications, seems to have the gift of keeping himself before the public, bringing to mind some of the greater lights in the same walk in London. Why is it necessary for chemists and other scientific men to do so much of the *réclame* now-a-days? Witness the Doremus puff, which I must be charitable enough to suppose uninspired. This choice bit was printed editorially, in the *New York Herald,* on the 23rd of March:—"Mr. R. Ogden Doremus, at the Brooklyn Tabernacle.—Among the experiments by which Dr. Doremus is to illustrate the correlation of light, heat, electricity, magnetism, and power, will be that famous and beautiful experiment, the *revolution of a globe of oil,* which has been so often tried in America by other chemists, but never successsfully carried out except by himself. *Like Orfila and other celebrated chemists, Dr. Doremus is enthusiastically devoted to music as well as science,* and it is doubtless at his suggestion that Mr. G. W. Morgan has volunteered to precede the lecture, with appropriate selections from Haydn's 'Creation.' Every evening thus offers a feast for the ear as well as the eye and the mind." I submit this extract to the appreciation of your readers, without further comment.

The next piece of legislation should be in regard to Paris Green. This deadly paint is much used; the Americans have a passion for green venetians, and consequently it is kept in enormous quantities in the shops of the oil and colourmen, and by the house painters. It is in great vogue, domestically, for the punishment of roaches, and nothing is easier than to buy sixpence worth at the nearest paint shop. The druggists being bound hand and foot as to selling poisons, it would be logical to look after painters. A very well-known lady has just poisoned herself with Paris green, in a moment of religious infatuation, it is said. This Paris green is as favourite a thing among our suiciders as the pan of charcoal, or the Vendôme plunge used to be in Paris. The house painters will have to be taken in hand by the Pharmaceutical Society, or by the assembled wisdom of the State at Albany.

An Act to "Regulate the Writing of Medical Prescriptions" is now before the legislature of this State; its provisions I have not yet been able to obtain.

Out in the centre of the Empire State, halfway to Buffalo, we have a county called Wayne, which is the head-quarters of the peppermint production. The disorganized state of business in Europe, and especially in France, always a large buyer of oil of peppermint, has led to a stagnation in the trade, and the peppermint farmers of Wayne county find themselves unable to dispose of their annual product, variously estimated in value at from £20,000 to £30,000 sterling. This important sum, withdrawn, or rather witheld from circulation, in a small locality quite changes the aspect of affairs there, and affords another illustration of the remote effects of the great Continental struggle which has just ended. Wayne county in the State of New York, and certain districts in the State of Michigan supply the world with peppermint oil; a few large operators, in former times, controlled the market, and frequently pushed prices to a wonderful figure; but of late years the magnitude of the crop is too great for such manipulation. The majority of the oil is impure, either from lack of care in separating other plants previous to distilling, or from wilful adulteration afterwards. A prominent exporter, whose brand, I believe, is well known with you and on the Continent, has gained his reputation by the good quality of the oil sent out under his label, in contradistinction to adulterated shipments, the arranging of which for a foreign market is a regular business here.

The county of Ulster, on the Hudson river, about fifty miles north of this city, is the source of supply for wintergreen oil, which, as a rule, is of much more uniform and reliable quality. We have large supplies of oil of spruce from Vermont, and oil of sassafras from Old Virginia and North Carolina.

A reaction is setting in about patent medicines; some of the newspapers now refuse to advertise such compounds, and even minor interior journals have commenced to exclude them from their columns. The substantial patent medicine operators have been brought into some discredit by the exploits of new hands in the field, who go ahead upon the "nothing to lose and everything to gain" system, and in many cases omit the trifling formality of settling their advertising bills. The majority of the country journals are now accepting business, other than local, only through some leading advertising house in the large cities, who have a better opportunity of scrutinising the character of the business offered than a country publisher can have. Some supervision of the character of the compounds constantly put forth as special remedies, is urgently called for here.

As in France, such preparations should be passed upon by a competent body before being allowed to be placed on sale. The absurd combinations frequently got out here as "Cure-alls" are a public danger; and while I do fully recognise the convenience and utility of a reputable proprietary remedy—and there are many such in vogue here, and enjoying a remunerative sale—I would have a stop put to the trifling of the ignoramuses who inflict upon the public their queer compounds, ostensibly "from an Indian recipe"—"from a prescription by a gifted clairvoyant," etc., etc. These fellows have not the first idea of medical matters; they are merely speculators upon the public credulity, entirely indifferent to the results of their quackery, except from a money-getting point of view.

NOTES "EN VACANCE."

Rennes, Bretaigne, March 5.

THIS, the ancient capital of Brittany, is a fine old city of large, well-built, solid-looking houses. Unlike many of the towns in western France, the streets are straight and regular, and, therefore, possessing little of the picturesque—no wood-carving on the house-fronts, as in Caen and Lisieux—no old château overhanging the town, as at Laval; and the cathedral is one of the few in this part of France that is not Gothic—it is copied from one of the Roman Basilicas.

Rennes has apparently been forgotten for 100 years, and it seems uninfluenced by the march of progress: even the large white head-dress of the women, almost abandoned in Normandy, is still continually seen here. The shops are certainly behind the age—small, with little windows, on the ground-floor of lofty, massive houses: the druggists especially make a poor display, though this is the case throughout all the provinces of France.

And, perhaps, they are right; they depend purely on the scientific portion of the business, on the dispensing that must of necessity come to them, because every sick person in a French town sends to the druggist for everything that has been ordered by the doctor. This is one great object that we ought to strive after in England. On the Continent there is no necessity for a display of brushes, cigars, or perfumery, for the simple reason that dispensing and the sale of drugs is sufficient for the druggist's requirements. It is true that this total absence of display often gives to the Pharmacy, in these provincial towns, an appearance of poverty. I continually see low, small shops or *officines,* with few or no show-jars or bottles, sometimes only a few struggling plants or a leech-jar in the window, half-filled stock bottles with dingy labels, a few dull-looking *spécialités* on the side-counters, dusty shelves, and slovenly assistants. But it not unfrequently happens that a poor little pharmacy, such as I have described, in which an English traveller would hesitate to take a £5 order, will take a seron of Calisaya bark or a case of castor-oil.

Again, it is excessively rare to meet with a failure amongst Continental chemists; they almost invariably do well, and meet their bills with exactitude. I mention this latter point, as it is worthy of notice: in France the traveller for the wholesale druggist, etc., never receives money, and the system of current three and six months' accounts is not known; for each invoice a bill is separately drawn by the wholesale house (occasionally writing in one sum several small invoices), and this bill is passed for payment through the bank, or is discounted in many cases even before acceptation. This plan certainly shows little confidence in their travellers; the chief advantage to the wholesale house is that long current accounts are avoided.

In the neighbourhood of Rennes large numbers of cantharides are collected, though these form, however, but a small part of the requirements of the great Paris houses. The peasants became aware of their presence by a heavy powerful odour that is perceptible in the air in the hot weather, and it is generally on a "Frenus" that the insects assemble, the leaves of which they are very fond of. Those who collect them go out before the sun has risen and beat the trees with long sticks, having previously spread cloths beneath the branches. This must necessarily be performed at a very early hour, as at the first ray of sunshine the cantharis opens his brilliant wing-cases and wakes up into busy motion. In the cloths the insects are exposed to the fumes of boiling vinegar, and then dried in the sun; they are then ready to be sent off to Paris.

I visited two ambulances here, but they possessed very few features worthy of notice or different from other hospitals. Good nursing seems the principal requirement, this is invariably provided by those heroic sisters of charity, ever ready to sacrifice their lives among small-pox and typhus as are the bravest soldiers before the cannon's mouth. But it is on the battle-field that the fearful realities of ambulance work stand forth. Not having been on the field immediately after any engagement, I cannot afford any personal experience, but in order to give a faint picture of the indescribable horrors of the first cares to the severely wounded, I will give the substance of the narrative given by an "aide" to an ambulance on active service.

"The horrible sights quite unnerved some of us: several times I vomited during my first day's experience. I remember after the battle of Gravelotte some wounded faces, or rather their remains, which haunt me still. What frightful wounds! Here is a Zouave with his mouth and palate fractured and split in all directions; he asks for water by a mute sign of agony, but his mouth is full of blood-clots and pieces of the broken jaw-bone, and the swollen tongue no longer allows any liquid to pass. We patiently sponged this wound, already beginning to give out a fœtid odour, and at last succeeded in enabling him, by means of a tube, to swallow a few mouthfuls of water; though speechless, his eyes, from which life was waning fast, thanked us. A sergeant of the Guard had an eye scooped out by a sabre—it hung by a fibre; as he was holding it for the 'aide' to endeavour to replace it, a jar came caused by the passage of artillery, the fibre broke and the eye fell, lost for ever. A young officer of Zouaves comes forward, showing us both his arms bent back and completely paralyzed; a ball had hit the spine at the nape of the neck, and the vertebral column seemed irreparably injured.

The greater number, preyed upon by the most intense thirst, eagerly seek the fresh air; we see some of them dragging themselves slowly out of the buildings and stretching themselves along the wall in order to receive, on their faces, the rain which begins to fall. Among these latter is a Turco; his face, hidden by a mask of coagulated blood, presents one large and continuous wound; life seems about extinct. We sponge his head with a view of discovering the exact injury received, and the sensation of the cold water causes an involuntary quivering of the body. The wound is hideous—we do not see many so horrible; a ball in a side-long course has torn the two eyes from their sockets and completely smashed the nasal bone in its passage; the flies are vigorously disputing the possession of the empty sockets. After a careful washing we fill up the spaces with lint, and cover the face with a damp cloth.

Let us now enter this way-side ambulance, where we shall find, lying in confusion, wounded belonging to every arm of the service. It is the third day after Gravelotte, and already the odour arising from the mass of diseased flesh is becoming unbearable; the floor itself is covered with red and clotted pieces of linen, with bloody and stiffened bandages, with lint dressings, yellow from suppurating surfaces."

My readers will excuse me if I stop short in these harrowing descriptions, that could be indefinitely multiplied. We have seen so many exciting accounts of the glories of the battle-field that a slight glimpse of the other side of the picture is necessary to keep our minds alive to the innumerable horrors of real warfare; at the same time, there are few things in this life harder or more trying than hospital work, amid the sharp screams of agony of a field ambulance.

LE MANS, March 25.

In this important town, the centre of several converging lines of rail, the realities of warfare are strongly brought home to the peaceful traveller. Before this city one of the most deadly struggles of the war took place. For the whole of one long day Chanzy held at bay the army of the Red Prince, and it was only towards nightfall that the cowardly defection of a body of Breton Mobiles compelled the French commander to order a general retreat towards Laval. In the town itself, the rear-guard were discovered in the morning by the Germans, and a severe though desultory musketry fire was kept up for some time, the marks of which are still to be seen on many of the houses in the main square and streets. The town was not sacked, but requisitions of every sort were imposed by the Prussians, numbers were lodged in every house, and the pillaging that went on under the officers' eyes produced almost the same result in the end. As usual, the druggists suffered but little; they, with their stores, were occasionally of great use, and the Germans, with their usual foresight, took care that they should remain uninjured. In the *salle à manger* of the Hôtel de France there remains a very palpable reminiscence of the fighting in the streets. A bullet passed through the door, and made its way down the room, above the table just at the height of the heads of those who twice a day assemble at the *table d'hôte*, burying itself in the wall at the further extremity of the room; fortunately it was not the hour of breakfast or dinner, and the hotel had on that day bidden good speed to its parting French guests, and had not as yet welcomed the coming Prussians. The hotels and *cafés* certainly have not had to complain of the enemy; both found the Germans first-rate customers, the former being, as a rule, paid by the municipalities. The *cafés*, however, were almost always paid in hard coin, thalers for the most part. In the *cafés* the Germans generally proved themselves to be sober, and though noisy, rarely disorderly. Their wonderful discipline, coupled with the respect and awe the private soldiers bear towards the officers, is the principal cause of this. I remember in Rouen, three weeks ago, being in a *café* with a pharmacien of the city where some Prussian soldiers were engaged in breaking the glass of the establishment. Suddenly a tall officer of grenadiers made his appearance on the scene, and to their intense affright, strode up and accosted them in a voice of thunder. He delivered a violent blow straight in the face of the man nearest to him, the second he caused to reel back with a back-hander on the side of the head, and the third he seized by the collar, throwing him on to the table, in the midst of the broken glass. The ignominious way in which they slunk out of the *café* may be imagined; but to an army in which the officers have such power, and command such respect, as long as they themselves remain so near the standard of perfection, everything is possible, and success becomes almost a matter of certainty. In Le Mans exists one of the few manufactories in France of calcined magnesia, but the product does not compare favourably with the English article, either in colour, softness, or absence of taste. It is put up in wooden boxes, each holding about two pounds, a method of packing which, by allowing access to the air, often produces partial re-absorption of carbonic acid gas, but which holds out to the pharmacien the advantage of receiving the package gratis. I am afraid that among the smaller chemists in France quality is very often, in many drugs and chemicals, sacrificed to price. Certain it is that the standard of excellence is higher in England than on the Continent.

The fine appearance of such drugs as opium, myrrh, aloes, etc.—the whiteness of several powders—the bright colour of powdered rhubarb and ginger—the purity of the chemicals universally insisted upon in England—seem to prove that, although in theory a French pharmacien must be a more scientific man than, at least until recently, was necessary at home, yet that the standard of excellence and purity has been raised mainly by the wholesale houses themselves, and kept at a higher degree with us than in France. The mention of calcined magnesia leads me to remark on the systematic *contrefaçon* of Henry's magnesia that is met with everywhere in France. It is put up in a similar bottle, with a forged threepenny patent medicine stamp (with Henry's name engraved on it), and a label in English calling particular attention to this stamp with their name engraved thereon, without which none is genuine; and this on a palpable forgery! The lightness of the magnesia would be sufficient to warn anyone who had ever noticed the weight of that used by Messrs. Henry, of Manchester; but it was ludicrous to me to be recommended by a medical man at Nantes to try some English magnesia, and on one of these bottles making its appearance from a neighbouring chemist's, to hear him go into ecstasies over the wonderful excellence that had been obtained by the English in this product, and this over a bottle that was palpably French, and as palpably contained a magnesia that any British chemist would have been ashamed of. These bottles are sold as *Magnesie Anglaise de Henry*, at prices varying from 1 fr. 50 c. to 4 fr., and the French public is certainly led to believe that they are buying a genuine English *spécialité*. Messrs. Roberts, of Paris, and the principal Paris wholesale houses, supply the genuine article, but the spurious imitation is put up in great quantities by the provincial pharmaciens, who procure in Paris bottles, labels, and wrappers in English, and forged imitations of the English patent medicine stamp.

PHARMACY IN PHILADELPHIA.

THE College held its semi-centennial anniversary on February 23rd, 1871, and there were great rejoicings. Most of our readers are aware that it is not only flourishing, but in full organisation. Lectures are delivered in chemistry, pharmacy, and botany, and there is a practical school and laboratory. The professors are Robert Bridges, M.D., General Chemistry; Edward Parrish, Theoretical and Practical Pharmacy; John M. Maisch, Materia Medica and Botany. The qualifications for graduation combine daily experience with book and lecture learning. We ourselves are following in this track, but we confess that we did not in this matter take the initiative. To return to the anniversary. About 250 were in attendance. Pharmacists and members of the medical profession fraternised. There were many speeches, showing that America is not nearer to the millenium than ourselves; and at last up rose Thomas S. Wiegand, who sketched the work accomplished by the College of Pharmacy, and from that topic he branched off into details respecting the publication of the Journal.

Now, as we in England have long regarded the American *Journal of Pharmacy* (Philadelphia) as the model of things that should be, we make no apology for the following extract:—

"The Journal commenced as a slim pamphlet, four numbers of which were issued in three years. It has now completed its forty-second volume of 600 pages yearly, and it was hazarding nothing to say that in no other serial was there more useful, practical, everyday, information suited to the wants of the apothecary, and that, after forty years' growth as a gratuitous business under the auspices of the Committee outside of the College, it had come to reside at home, and that this Hall was now the office of publication, where, under the direction of its business Editor, its material interests would receive prompt attention. Mr. Wiegand then alluded to the resignation of the Editor, to take effect at an early date. He, in common with the members generally, regretted the change, but that after the reasons assigned the College felt it necessary to accept. There was one duty left, that of acknowledging the great debt we all owe to the Editor for his untiring labours, and asking his acceptance, from his many friends, of a testimonial to this feeling. [The Editor, who until this moment was unconscious of having any part to act in the programme, was completely taken by surprise when Mr. Wiegand stepped towards him and presented a handsome gold watch, of American manufacture, bearing his monogram and a complimentary inscription.]"

We beg to offer the Editor another testimonial, the heartfelt thanks of all his English readers. We were afraid from a sentence written by himself, "that that which had been a pleasure had now ceased to be so," lest some unexplained bitterness had led to a resignation of editorial duties. Surely it cannot be interpreted into any breach of social etiquette if we quote one passage from his own explanatory letter, which we are sure will give as much pleasure to others as it certainly afforded to ourselves.

"I began life as an apprentice, with scientific pharmacy as my first love, and during forty years I have served her with constancy. Teaching and editing are avocations that arose out of circumstances exterior to my vocation as a pharmaceutist, though in harmony with it, and for which I had not been prepared by a liberal education. The harvest was ready and the labourers scarce, so I entered and did my best. A strong desire for liberation from that kind of responsibility that requires prompt mental labour at stated intervals has seized upon me; in a word, to rest from forced work. I always expect to labour, voluntarily, while life remains, but just now, in the intervals of business, I derive more pleasure from training vines and fruit trees than from chemical investigations."

If Mr. Procter's vines only flourish, and his fruit trees bear, as his English friends would wish, he may walk down the main streets of Philadelphia in the new character of an eminent horticulturist.

Seriously speaking, the *Philadelphia Journal of Pharmacy* is entitled to respectful admiration.

J. I.

LEATH AND ROSS'S SACCHARATED ALCOHOLIC EXTRACTS.

THE name of Leath and Ross being connected with these new medicinal preparations is indicative of their homœopathic relations. That they will become popular with the practitioners of that school we think there can be no doubt. They are the exact equivalents in strength of the homœopathic mother-tinctures, that is to say, they contain 10 per cent. of the remedy which they represent. But they possess the advantage appreciable by every homœopathic dispenser of containing this remedy in the form of a dry, impalpable powder. The homœopaths themselves are gradually splitting into two sections, namely, those who combine infinitesimality with homœopathy, and others who, believing no less in the doctrine of curing by similars, show so much deference to human reason as to approach in their practice more nearly to appreciable doses. To the medicines employed by this latter class these new extracts will be a valuable addition.

But it is not exclusively to them that as we think, the saccharated alcoholic extracts will be useful. They are certainly about the best specimens of "elegant pharmacy" which English manufacturers have introduced. They present a very reliable and pleasant form whereby to administrate many of our most potent medicines, and as far as we can judge without therapeutical experience, they possess the virtues of such medicines unimpaired. Every pharmaceutical chemist will be pleased to examine these very admirably prepared medicines.

NEW TOOTHACHE REMEDY.

WE should have nothing else to do if we were to notice all the professed remedies for toothache and every other human ill which are introduced to the suffering public, but we have one now before us which merits mention for its ingenuity apart from its probable merits. It is called "Mohr's Turkish Galvano-Magnetic Silver Anodyne," and its principle is, by the aid of a galvano-magnetic needle, to produce a gentle electric effect on the nerve and gums. A piece of cotton wool is applied to the tooth saturated with a liquid in which is suspended some silver leaf. Applying to this the point of the little copper coil the galvanic action is undoubtedly induced, and we can readily believe, in many cases, with excellent effect. The whole apparatus complete is sold as a patent medicine.

THE ROYAL NUPTIAL BOUQUET.

If somewhat late, we are none the less sincere in the expression of our hearty good wishes and congratulations to the fair English princess on her happy marriage. An eminent firm in our trade has most promptly and appropriately celebrated the occasion by the introduction of a delightful perfume dedicated to the bride. We have to announce, to the shame of Scotland, the land which royalty has on this occasion so signally honoured, that this graceful tribute has been rendered by a Dublin firm, Messrs. McMaster, Hodgson, and Co. This is very loyal, and we hope it will be appreciated by those to whom honour is thus testified. Round the border of their tasteful label the shamrock leaf modestly peeps out between the more brilliantly coloured roses and thistles. The centre of the label is occupied with the Argyll plaid, as we presume, the intense ugliness of which is a set-off for the brilliant golden emblazonments raised upon it. As perfumers, Messrs. McMaster and Co. show themselves well able to compete with the great London houses, who have secured their position in the fashionable world not less by the wit of their nomenclature than by the sweetness of their essences.

PURVIS'S QUININE BISCUITS.

We have examined the article named in the title with the most satisfactory results. Each biscuit contains an appreciable quantity of sulphate of quinine, and in no form is quinine presented in such a palatable medium. We believe the proprietor will find them become very popular. They offer a splendid excuse for those semi-invalids who like to take a glass of wine in the morning.

Messrs. Millard and Sons send us a sample of their Face-Powder, similar to that sold in sixpenny envelopes, put up in elegant little boxes, each containing a compartment for a puff, which is also included. The boxes are sold at one and two shillings.

Quekett Microscopical Club.—The annual *conversazione* of this Club took place at University College on Friday evening, and was very largely attended, as it usually is. The objects provided by the Club for the entertainment of its guests comprised all the optical novelties of the year, and the members as well as the leading opticians did all in their power to exhibit objects worthy of the position the Club holds in the encouragement of microscopical science. Photography was on this, as at the last annual *soirée*, well represented. A large and interesting series of photographs of Indian temples and scenery was kindly lent by the India Office; also frames of photographs were lent by Mr. J. Van Voorst, Mr. John Foster, Mr. E. Kiddle, and Mr. A. Shapcott. Mr. Apps exhibited at frequent intervals the marvellous electrical effects produced by means of his well-known induction coil. In the midst of so many attractions it is difficult to single out for especial mention any one feature of interest, but that which seemed possessed, at this time, of surpassed interest was an exhibition on the screen by the oxy-hydrogen light of a series of transparent photographs illustrative of the late lamentable Franco-Prussian war, contributed by the London Stereoscopic Company, with an explanatory lecture by Mr. James Martin, which commanded crowded audiences all the evening.

Pharmacy.

Milk is recommended as the best vehicle for the administration of iodine. Dr. Hagar suggests the following formula for "iodized milk":—

Iodine	1 part.
Alcohol	10 parts.
Milk	90 parts.

SYRUPS OF THE PHOSPHATES.

Mr. M. Carteighe, in the *Pharmaceutical Journal*, gives some new formulæ for the preparation of syrups of the phosphates. It is suggested that by using a stronger acid the syrup. ferri phosph. is more readily made, and has been found to keep better than when prepared according to the B.P. process. The following formulæ are given:—

Syrup of Phosphate of Iron]

Phosphate of iron	96 grs.
Water.	9 fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500 .	7 fl. drms.
Syrup	10 fl. oz.

Rub the phosphate of iron with the water in a glass mortar, add the phosphoric acid and filter the mixture into the syrup.

As thus prepared, it contains the same proportion of iron, about 2 minims less of the dilute acid (25 instead of 27), and rather more sugar than when prepared according to the Pharmacopœia.

The phosphate of iron is made by the B.P. process, and dried at a temperature not exceeding 100 deg. F. The specimens I have found in the ordinary course of trade are not readily soluble in the acid. This want of solubility is, I believe, due to the length of time they have been kept before sale.

I have obtained the best results with phosphate only a few days old, and find it advantageous to make as much as is required frequently.

Syrupy phosphoric acid of sp. gr. 1·500 may now be obtained of any manufacturing chemist, and, according to Dr. Watts's table, contains about 50 per cent. of P_2O_5. It is made by the action of nitric acid on phosphorus, the excess of acid being driven off in a platinum vessel.

Manganese is sometimes prescribed with or without iron, and according to Pereira, the former is a useful adjunct to ferruginous preparations, and occasionally a desirable substitute for them.

Syrup of Phosphate of Manganese

may be prepared in a similar manner with the following ingredients:—

Phosphate of manganese . . .	96 grs.
Water	9 fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500 .	7 fl. drms.
Syrup	10 fl. oz.

Strength—1 grain phosphate of manganese and acid equal to about 25 minims of the dilute phosphoric acid in each fluid drachm.

[The phosphate of manganese is made in the same manner as the phosphate of iron, substituting sulphate of manganese for the ferrous sulphate.]

Syrup of Phosphate of Iron with Manganese.

Phosphate of iron	72 grs.
Phosphate of manganese . . .	48 grs.
Water.	8 fl. drms.
Syrupy phosphoric acid . . .	8 fl. drms.
Syrup	10 fl. oz.

Rub the powders with the water, add the acid and filter into the syrup.

Each fluid drachm contains ¾-grain phosphate of iron, ½-grain phosphate of manganese and acid equal to about 30 minims of the dilute phosphoric acid, B.P.

Syrup of Phosphate of Iron and Lime.

Take of Phosphate of iron . . .	96 grs.
Phosphate of lime . . .	192 grs.
Water	8 fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500	8 fl. drms.
Syrup	10 fl. oz.

Mix the powders with the water in a glass mortar, add the acid and filter into the syrup.

Each fluid drachm contains 1 grain of phosphate of iron, 2 grains of phosphate of lime, and an amount of acid equal to about 30 minims of the dilute phosphoric acid, B.P.

[The phosphate of lime is made by precipitation from solutions of chloride of calcium and phosphate of soda, and dried at 100 deg. F., and should not be kept too long before use. That made from bone ash, as the Pharmacopœia directs, is much less readily soluble.]

Syrup of Phosphate of Zinc.

Phosphate of zinc	192 grs.
Water	13½ fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500 .	5 fl. drms.
Syrup	10 fl. oz.

Rub the phosphate with the water, add the acid and filter into the syrup.

Each fluid drachm contains 2 grains of zinc phosphate and about 18 minims of dilute phosphoric acid.

Syrup of Phosphate of Quinine.

Take of Phosphate of quinia . . .	96 grs.
Water	11 fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500	2½ fl. drms.
Syrup	10 fl. oz.

Mix the acid with the water, add the quinia and filter into the syrup.

Each fluid drachm contains 1 grain of phosphate of quinine and acid, equal to about 10 minims of the dilute phosphoric acid.

[In the absence of the phosphate, the same weight of quinia, prepared by precipitating an acidulated solution of the disulphate by solution of ammonia, collecting, washing, and drying at 100 deg. F., may be used.]

Syrup of Phosphate of Iron with Quinine.

Take of Phosphate of iron . . .	192 grs.
Phosphate of quinia . .	96 grs.
Water	7 fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500	9 fl. drms.
Syrup	10 fl. oz.

Rub the powders with the water, add the acid, and filter into the syrup.

Each fluid drachm contains 2 grains of phosphate of iron and 1 grain of phosphate of quinine.

Syrup of Phosphate of Iron, Quinine, and Strychnine.—Easton's Syrup.

Take of Phosphate of iron . . .	192 grs.
Phosphate of quinia . .	96 grs.
Strychnia (in crystals) . .	3 grs.
Water	7 fl. drms.
Syrupy phosphoric acid, sp. gr. 1·500	9 fl. drms.
Syrup	10 fl. oz.

Rub the phosphate of iron with 5 drachms of the water in a glass mortar, dissolve the strychnia and quinia in the acid, previously mixed with the remaining 2 drachms of water; mix and filter into the syrup.

Each fluid drachm contains 2 grains of phosphate of iron, 1 grain of phosphate of quinine, and 1-32nd part of a grain of strychnine.

Syrup of Phosphate of Iron and Strychnine

may be prepared in the same manner as the last, omitting the phosphate of quinine.

Mr. Alfred Rose, in the same journal, commenting on Mr. Carteighe's communication, suggests that from his experience the most important point in order to obtain a syrup (ferri phosph.) which will keep well is to use freshly-prepared, or, at least, freshly diluted, phosphoric acid. He thinks Mr. Carteighe's formula would give too thin a syrup, and proposes the following, which he has found satisfactory:

Phosphate of iron (freshly precipitated)	96 grs.
Phosphoric acid, sp. gr. 1·5 . . .	7 fl. dr.
Sugar	8¼ oz.
Water (q.s. to form 12 fl. oz. syr.) . .	5½ fl. oz.

Mix the acid with the water, dissolve the phosphate, then add the sugar, shaking occasionally until dissolved.

CASTOR-OIL SOAP.

Mr. Rimmington has proposed the manufacture of castor-oil soap for medicinal purposes. He believes that it possesses slightly aperient properties. Describing some which he has himself prepared, he says it has a clean yellowish-white colour, is free from smell; it soon becomes dry and hard, and is easily powdered; it has no tendency to soften or deliquesce on exposure to the air. In proof spirit it makes a perfectly clear and colourless solution, with only little sediment.

Dentistry.

(WRITTEN EXPRESSLY FOR "THE CHEMIST AND DRUGGIST.")

IN a previous paper it was said that no tooth should be extracted until every available means had been tried to save it by proper treatment; but as there are many diseases of the teeth (commonly called toothache) arising from a variety of causes, and requiring different modes of treatment, we will endeavour to give such information as to the structure, arrangement, and diseases of the teeth, and the surrounding parts, together with the practical treatment of such cases as are likely to come under the observation of the pharmaceutist, and thus give him the opportunity in a great number of cases of saving, for a time, at least, so valuable a member as a tooth. But for those who really wish to make dentistry their study, we would recommend the more elaborate works of Tomes, Harris, Taft, Fox, and Bond.

Your correspondent, Mr. J. Bates, is anxious for instructions in stopping, and to know where he can get a good amalgam. Stopping will come in its place as we proceed; and as the alloys for amalgam must be of pure metals, and are best made in quantities, we prefer buying our fillings from the dental depôts. We like in all cases a thoroughness in working; therefore, where it is possible, we use gold foil for stoppings, or, when price is an object, tin foil, on account of its purity; but as these materials require great practice to be really serviceable, and as most patients delay too long their visit to the dentist, we would rather see a good amalgam stopping than a bad gold one. In any case let the metal be pure and good, avoiding those abominable preparations of bad brass which are frequently given in quasi-medical publications.

Mr. Bates complains of the tricks of the advertising travelling dentists, who are so anxious to extract that they may insert artificial teeth. There are in dentistry, as in all other professions, men possessing more impudence than intelligence, who are ever ready to adopt any means of obtaining an idle living; yet there are many good men and true who periodically visit towns in the vicinity of their homes, and who scorn the tricks and practices of those quacking scamps. But as anyone who is able to extract a tooth is entitled to call himself a surgeon-dentist, we cannot wonder at the present state of things. Is it right? We say, No! And as the public have no means of judging until their mouths are mangled and their purses emptied, we shall not rest until the people are protected against the quack, and the standard of the profession is raised to its proper height.

We are most happy to find that a movement has been made in the right direction by the worthy editor of the *Journal of Dental Science*, C. J. Fox, Esq., and we heartily thank him for his efforts. But in the meantime, we know that there are extensive districts in which it would be impossible for a respectable dentist to exist by his profession alone; and, as a rule, it does not pay his expenses to leave his home for those visits, hence they are left to the stroller. We would, therefore, much prefer that the afflicted should consult an intelligent pharmaceutist than a pretentious quack.

To form a perfect set of temporary teeth, there are in the mouth of a child of three years of age, twenty, ten in each jaw; the upper contains two central incisors, two lateral incisors, two canines or cuspidati, and four molars. The lower, or inferior maxilla contains an equal number, with names corresponding. The time of their eruption is rather uncertain, varying much, from constitutional causes ; but the following is pretty nearly the average period and order of development :—

Central incisors,	from	5 to 8	months	after birth.
Lateral incisors,	,,	7 to 10	,,	,,
First molars,	,,	12 to 16	,,	,,
Canines,	,,	14 to 20	,,	,,
Second molars,	,,	20 to 36	,,	,,

These, in a healthy subject, begin to make way for the permanent teeth at about six years of age, when the first permanent molars make their appearance. The following table, from Tome's "Dental Physiology and Surgery," will give the average development of the permanent teeth :—

First molars	7	years.
Central incisors	8	,,
Lateral incisors	9	,,
First bicuspids	10	,,
Second bicuspids	11	,,
Cuspidati	12	,,
Second molars	13	,,
Dentes sapientæ, or third molars .	19 to 25	,,

A perfect set of permanent teeth contains thirty-two,—sixteen upper and sixteen lower,—namely, four central incisors, four canines or cuspidati, eight bicuspid, and twelve molar. Usually the lower teeth are developed a little before the upper. These teeth are inserted in the margin of the jaw, in what is termed the alveolar process. This process forms the sockets of the teeth, and is of rather dense bone, with cavities corresponding in form and number to the fangs of the teeth ; the walls of the process are beautifully adapted for their purpose. The form of the arch gives great firmness, with lightness ; the teeth are so beautifully arranged, that in a good set the upper incisors jut out past the face of the lower, to incise or cut the food ; the canines, from their strength and position, will tear anything unusually hard ; the cups of the bicuspid intersect, to break up the mass, and the crowns of the molars working in the same way complete the grinding. These are held firm in position by the process, the inner wall being compact and firm to support the pressure, whilst the outer wall is more elastic. The margins of the process are also perfectly finished. The sides of these cavities are covered with a periosteum, or membranous coating, which membrane is highly organized, with its nerves and capillary tubes for renewing bone ; the point of each socket is pierced with a small foramen. Through this small opening pass the nerves and blood-vessels which nourish the central pulp of the tooth.

The tooth is composed of four distinct parts or substances. First, the enamel, perceptible to all. This is a dense crystalline substance of intense hardness, to endure severe attrition ; it ceases where the crown of the tooth joins the margin of the gums. Second, the cementum, which covers the fang, and is itself covered by a continuation of the periosteum. Third, the dentine. This forms the body of the tooth ; it is of great density, but far inferior to the enamel. Fourth, the pulp, or central nerve, occupying the centre of each fang ; it then passes through the fine opening pierced in the point of the fang and through the base of the alveolus ; it there joins the nerve and arterial trunks which traverse the maxilla, upper and lower.

CHEMICAL SOCIETY,

March 16th.

PROFESSOR WILLIAMSON, F.R.S., President, in the Chair. Mr. C. H. Piesse was elected a Fellow. Mr. C. H. GILL read a note "On the examination of Glucose containing Sugars." It is known that coloured sugar solutions are decolorised and clarified by the addition of basic lead acetate before they are submitted to optical examination. Mr. Gill now found that the power of invert sugar to rotate a ray of polarised light is greatly altered by the presence of that reagent. The alteration takes place only on the levulose in the liquid, the dextrose suffers no change of optical properties. This alteration is not permanent; on removing the lead, or acidifying the liquid, the original rotatory power is restored. Mr. Gill employs these latter reactions in order to obtain correct numbers with the saccharometer. He uses a strong solution of sulphuric dioxide, which removes the lead, and, at the same time, bleaches the liquid, but is incapable of inverting cane sugar in the cold, even in twenty-four hours. The pressure of the lead-salt in sugar solutions is also disadvantageous when the glucose has to be estimated by Fehling's copper solution, as it partly becomes reduced, and thus necessitates the use of a greater volume of the saccharine solution ; the removal of the lead does away with this source of error.

Mr. D. HOWARD made some remarks on the boiling point of a mixture of amylic alcohol and water.

Mr. PERKIN communicated that he had succeeded in obtaining bromacetic acid by gradual addition of bromine to heated acetic anhydride, boiling for some time, mixing with water, and subsequent distillation.

Mr. WARRINGTON spoke briefly of an easy and sufficiently correct determination of ammonic sulphocyanide in commercial sulphate of ammonia.

AT the anniversary meeting, held on March 30th, Professor Williamson, F.R.S., President, in the chair, the President delivered the following address :—

Gentlemen,—I feel much pleasure in congratulating you on the rapidly increasing prosperity of our Society, and the enlargement which has taken place in its sphere of usefulness. For, on the one hand, the number of our Fellows continues to show a most satisfactory increase, and, on the other hand, your Council has made arrangements for carrying out the system of monthly reports which has been for some time in contemplation. It was hoped that the Chemical Society of Paris might from the first co-operate with us in the preparation of these monthly reports, but circumstances beyond their control have prevented the sister society from joining us in the beginning of this year. Deeming it undesirable to delay the commencement of the reports, your Council still look forward to the future co-operation of the Paris Society in their preparation.

You are aware that the present available income of the Society was not considered to be sufficient to defray the additional expense of writing and printing these reports, and I have the pleasure of informing you that contributions to the extent of £1,175 have been promised by members of your body towards supplying the deficit during the first five years of the appearance of these reports. The British Association has, moreover, granted us the sum of £100 for this year in aid of the undertaking. We hope that in five years the funds of the Society may have sufficiently increased to enable us to pay the whole expense of the reports, and that their publication will be valued by the members of our Society, and promote the advancement of our science wherever the English language is read. The next number of our Journal, which I hope to see in a few days, will be the first to contain the monthly reports in addition to the original papers contributed to the Society.

At the last anniversary meeting we numbered 551 ordinary members, and thirty-six foreign members, six of the former have withdrawn from the Society. On the other hand, forty-two new members have been elected into the Society. We have lost five ordinary members by death, viz., Mr. George Jolley, Dr. W. A. Miller, Dr. Aug. Matthiessen, Dr. I. S. Muspratt, and Mr. W. W. Rouch, and it is also my painful duty to record the death of two of our foreign members, viz., Prof. Gustav Magnus and Prof. Weltzien.

After the delivery of the address, the Treasurer read his account of the Society's finances, which shows a balance of more than £1,300 at the Society's bankers.

The election of the President, the officers, and the other members of Council for the ensuing year was then proceeded with, and the following is the list of the gentlemen elected.

PRESIDENT.—Frankland, E., D.C.L., F.R.S.

VICE-PRESIDENTS (who have filled the office of President).—Brodie, Sir B. C., F.R.S.; De la Rue, Warren, Ph.D., F.R.S. ; Hofmann, A. W., D.C.L., F.R.S. ; Playfair, Lyon, Ph.D., C.B., F.R.S.; Williamson, A. W., Ph.D., F.R.S.; Yorke, Col. P., F.R.S.

Vice-Presidents.—Debus, H., Ph.D., F.R.S.; Gilbert, J. H., Ph.D., F.R.S.; Noad, H. M., Ph.D., F.R.S.; Odling, W., M.B., F.R.S.; Redwood, T., Ph.D.; Stenhouse, J., Ph. D., F.R.S.

Secretaries.—Harcourt, A. Vernon, M.A., F.R.S.; Perkin, W. H., F.R.S.

Foreign Secretary.—Müller. H., Ph.D., F.R.S.

Treasurer.—Abel, F. A., F.R.S.

Members of Council.—Atkinson, E., Ph.D.; Bassett, H.; Bloxam, C. L.; Dupre, A., Ph.D.; Field, F., F.R.S.; Holzmann, M., Ph.D.; McLeod, H.; Mills, E. J., D.Sc.; Roscoe, H. E., Ph.D., F.R.S.; Russell, W. J., Ph.D.; Smith, R. Angus, Ph.D., F.R.S.; Voelcker, A., Ph.D., F.R.S.

Votes of thanks to the retiring President, the Secretaries, the Treasurer, etc., terminated the meeting.

THE PHARMACISTS OF THE FUTURE.

THE most popular and interesting of the weekly evening meetings of the Society of Arts this season was held on the 29th of March, when Miss Emily Faithfull read a most able lecture, and introduced an animated discussion on "Woman's Work with special reference to Industrial Employment." The whole is reported in the *Journal of the Society of Arts* (March 31), but we extract from the report of Miss Faithfull's lecture a few sentences bearing on the practice of pharmacy. These indicate, either that Miss Faithfull had not sufficiently acquainted herself with this part of her subject, or else that she was guilty of the fault of making a little effect by conquering a position which the enemy made no show of holding—a fault, we may say, so common among male advocates of any particular cause as to be hardly noticeable.

"The dispensing of medicine," said Miss Faithfull, "has been tried as a fitting occupation, and is one with which women in olden days were familiar. In a letter I received from Dr. Garrett-Anderson, a fortnight since, in answer to a question I had put to her on this matter, she observes, 'There is no reason why women should not be engaged in dispensing, both in charitable institutions, in shops, and in private practice, as assistants to general medical practitioners. As a matter of fact, hundreds of women so dispense, in an amateur way, for their husbands or fathers.' She adds, 'We have trained four or five women as dispensers at St. Mary's Dispensary, and we have found them careful and apt pupils, and ready to submit themselves cheerfully to the necessary conditions imposed on them. Our first pupil held the situation of dispenser for the last four years at a salary of £40 a year, and she gives me great satisfaction.' "I believe that the objections generally raised against the employment of women in this direction chiefly refer to the laborious manipulation with pestle and mortar, the requisite accuracy and exactness for weighing and mixing, or the difficulty an ordinary chemist would experience in receiving women apprentices. It is certainly curious to observe the objections which suggest themselves respecting new employments, which are not even recognised as such under circumstances to which custom has previously reconciled us. Take the last, for example. Girls are continually apprenticed to stationers and drapers, and we all know that measuring ribbons and selling books and envelopes under a master's eye, and probably with male assistants, can be undertaken without this extraordinary difficulty which a novel proposal encounters. I think that pharmacy is a peculiarly suitable employment for women, and it is by no means an untried experiment, for in the last census 388 women were returned as chemists and druggists, and 243 as manufacturing chemists; and though most of those are probably only carrying on the business of a deceased father or husband by means of male assistants, some are, to my own knowledge, conducting the work themselves, and performing the part which usually falls to the head of the establishment."

One might suppose from all this that there was a determined opposition on the part of the present occupiers of pharmaceutical pinnacles to the advancement of female work in that direction. As a matter of fact there is none whatever. There are no special difficulties in the way of any woman who wishes to become a chemist and druggist. Of course she must pass the examinations just the same as men, but the examiners are human, and we doubt therefore if she would find the portal quite so narrow even as some of the present generation think it. Individual chemists and druggists might object, and would have a perfect right to do, to take female apprentices, but even this is quite a matter of assumption, not one of them probably having ever been asked. The objections which Miss Faithfull so cleverly demolished, never have, nor ever would be urged by men of common sense, and no one, we imagine, would assert for a moment that there was anything in pharmaceutical pursuits which should exclude from them the competition of women. Miss Faithfull thinks pharmacy is a peculiarly suitable employment for women. Possibly it is; but it is quite certain that the women themselves do not so regard it. Up to the present time no lady has presented herself for examination at the Pharmaceutical Society. When one does, and when she is treated with the same vulgar rudeness by pharmaceutical authorities and pharmaceutical organs as the medical authorities and the medical press have on more than one occasion shown to the sex, then will be the time for Miss Faithfull to bring out her arguments. These remarks apply with equal force to almost every other trade. Who prevents any lady of capital from investing her money in any business which she may happen to fancy? Does society bind her down to Berlin wool and staylaces? Miss Faithfull herself in venturing on the novel enterprise of establishing a printing and publishing office, can hardly assert that she has had to encounter exceptional difficulties. The fact is, it is the women to whom these lectures should be addressed not the men. The world is before them, to choose their sphere of labour if they want one, and, to quote a golden sentence which fell from another lady during the discussion, which followed, "the proper sphere for every human being is the highest which he or she is capable of attaining."

THE DUTIES OF DRUGGISTS.

BY PROFESSOR PARRISH.

THE fiftieth annual commencement of the Philadelphia College of Pharmacy, was celebrated on the 15th of March. Professor Edward Parrish delivered an address, of which we are able to give the latter portion in full:—

"Behind your counters and in your laboratories you will be surrounded with materials in great variety from all countries and climes. The implements and processes of your art will enable you to bring these under examination as to their composition and relations to other materials. With the education received in this college you now know more about them than the most learned physician of antiquity could have known. Indeed, your possession of the diploma just conferred upon you presupposes more positive knowledge of the physical and chemical properties of drugs than a physician of ordinary education can be expected to possess. If animated by a love of science you will find a world of interest in your daily pursuits.

"I rejoice to salute young men on the threshold of their business life with words of hearty encouragement. Ambition is natural and right; it well befits your years, and that would be an ungracious salutation which should predict your failure in any well-directed effort. When disappointments come they will bring their lessons, and the experience of life, if you read it aright, will show you their uses in developing character and stimulating to wiser and better efforts. Give them their just weight, but no more. 'Try again' is as good a rule in the affairs of life as it is in the laboratory of the chemist. Be patient. Nothing is so apt to mar success as undue haste. Success, if substantial, must be like everything else substantial—of slow growth.

"Let your reputation be founded on industry, perseverance, knowledge, prudence, and strict honesty in word and deed, and it will be worth more to you in mature life, than a fortune rapidly acquired by any of the tricks of trade. The world is full of charlatans, and in no profession do they thrive more than in ours. Men take little note of the obscure or unsuccessful, but now and then one empyric, more bold and unscrupulous than others, is puffed into notoriety by deceitful artifices. A crowd of well-paid flatterers set him on a pedestal of conceit, where he sits content while the giddy laugh at him, honest men avoid him, and the wise and good, according to their temperament or disposition, scorn or pity him.

"Living in showy splendour on the ignorance and credulity of others, such men illustrate the saying of the wise man: 'He that hasteth to be rich hath an evil eye, and considereth not that poverty shall come upon him.' There is no poverty like want of the respect and confidence of others, unless it be that want of *self-respect* which makes substantial happiness an imposibility.

"In selecting your profession, you have chosen a life of daily and hourly contact with your fellow-men. However your tastes and inclinations may develop, your business will require that most of your time shall be spent in converse and traffic with those who stand toward you in the relation of customers or patrons. The well-conducted pharmacy is a *centre* wherever located. Its owner and his assistants are expected to possess much information on many subjects.

"Not only must they know the properties, uses, doses, and prices of all the varied merchandise in their store, but they should be able to direct the inquirer where to procure anything not falling within the range of their stock. They must tell how to extract grease, iron-mould, ink, and all other stains, and guard their neighbours from numerous petty impositions and frauds to which they are constantly exposed. It will be well if their skill in minor surgery fits them to extract a cinder from the eye of a fair customer, to close the bleeding gash or bind up the mashed finger of the neighbouring mechanic, or stop the aching tooth of the suffering schoolboy. They are liable to be called to administer the needful antidote in a case of poisoning, or to anticipate the arrival of the physician when some sudden and alarming accident has created a panic.

"Besides all these offices which pertain to their business, druggists are rather expected to know where everybody lives thereaway, what time they dine, or come home in the evening, and where their place of business is. They will be asked at what hours the trains leave and arrive, when the mail closes, and whether it is going to rain. Such varied and perplexing talk, often interfering with the responsible duties of the prescription counter, is well calculated to test the temper of the pharmacist. If you cultivate your best dispositions and instincts, you will, I think, learn to meet the annoyances I have hinted at with a mingled politeness and dignity. Your responsible position entitles you to the respect of all. You may secure it, if you will, not by assuming an air of importance, which may excite ridicule or resentment, but by possessing yourselves in a constant habit of self-respect, which will secure the respect of others.

"The obligations of buyer and seller, in every legitimate business, are mutual; in ours, despite much that is said to the contrary, the remuneration received is often a poor recompense for the peculiarly responsible service rendered.

"If you perform your work with skill and honesty you deserve the thanks of those who avail themselves of it; you therefore do well to show by your uniform bearing that a consciousness of this fact debars you from obsequious manners and extravagant demonstrations of an obligation you do not feel.

"The pharmacist should never forget that, jointly with his colleagues of the medical profession, it is his duty to do all that lies within the range of science and art for the relief of suffering and the cure of disease.

"This duty extends, not only to the cases in which his aid is especially sought, but involve a general readiness to co-operate in the great work of extending and perfecting the resources of the healing art, by contributing the results of his observation and experience to the common stock.

"The Philadelphia College of Pharmacy has been foremost, through its schools, its journal, and the labours of many of its graduates, in promoting and extending pharmaceutical science throughout our country, a work steadily carried on for just half a century.

"To you who enter its alumni this evening it extends a hand of welcome, and invites your co-operation and support. Some of you locate among us, in this centre of pharmaceutical knowledge, others go away to the far West and South. We trust that the seed sown during the course of instruction just now completed may bring forth much fruit."

MESSRS. EDWIN BLYDE AND CO., Truss Makers, of Sheffield, have removed from Eyre-street to Charles-lane Works.

REVIEWS

PHYSICAL GEOGRAPHY AND HEART DISEASE.*

WE have before us the commencement of a work of great medical and sanitary importance. The statistics of the Registrar-General with regard to the mortality of every district of England and Wales are now so ample that they offer a most promising field of investigation to those who are studying to diminish "the dangers of existence." There is no doubt at all that considerable practical benefits have resulted from their publication in the increased attention which has necessarily been directed to the removal of the causes of higher than average rates of mortality in the towns and districts where these occur. Mr. Haviland's plan is to show, in a series of ten maps, the relative fatality of the ten most serious diseases which give the Registrar-General's totals. The analysis of each map will then probably give some results of no mean importance, showing to some extent the causes which influence the particular disease under consideration. Our subsequent remarks will illustrate our meaning.

In this first map of the series the geographical distribution of heart disease and dropsy is depicted. It is drawn on the scale of twelve miles to an inch, and covers the whole of England and Wales. We have also the metropolitan district shown on a much larger scale. The map is coloured red and blue, the former indicating that the mortality of the district, from the cause we are alluding to be it remembered, is below the average, while a blue tint marks a mortality exceeding the average. These colours are again subdivided into three distinct shades, the deepest in either case showing the extreme of health or disease respectively.

The annual average of deaths from heart disease and dropsy throughout England and Wales is twelve to every 10,000 inhabitants. The three red shades on the map indicate a mortality 4—6, 7—9, 10—12, while by the same gradations the blue shades reach up to twenty-one deaths annually in every 10,000 inhabitants.

Thus far we have referred to the map. We now come to remark on the letterpress which accompanies it. The information given, and the conclusions drawn from the facts proved, are of great interest. We shall have no space to follow Mr. Haviland through all his careful calculations, which are presented in a most clear and logical manner. And we avoid all the supplementary statistics which are to be found respecting the various degrees of mortality among persons of various ages, and between the sexes. The conclusion which Mr. Haviland arrives at is this: "That wherever the sea-air has uninterrupted access, as over a flat country, up broad vales or valleys, and elevated country, we find a low mortality from heart disease and dropsy, and that, on the contrary, in places where the tidal wave has no access, where the rivers run at right angles to its course, or to that of the prevailing winds, there we find the highest mortality from this cause of death."

A map which is simply divided into the eleven registration districts is the first proof presented. Here we see that Wales is the most healthy part of the kingdom in respect to heart disease. Next come the exposed parts of the country between the Irish and the North Seas, the eastern division (Norfolk, Suffolk, and Essex), also showing good results. This is, in a general way, strong confirmatory evidence of the proposition quoted above. Next we have a map which takes the fifty-three registration counties, and, finally, the large map showing the relative healthiness of the 623 union districts of England and Wales. When we thus come to look at the districts singly, the coincidence of a large degree of mortality from heart disease, with sheltered situations, is very remarkable. The subject is of great interest to all medical men, but wealthy public institutions, insurance offices, and other companies, will, doubtless, support the graphic publication of these statistical results.

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* The "Geographical Distribution of Heart Disease and Dropsy in England and Wales." By ALFRED HAVILAND, M.R.C.S., etc., Lecturer on the Geography of Disease in England and Wales at St. Thomas's Hospital. Edinburgh and London: W. and A. K. Johnston.

NEMO ME IMPUNE LACESSIT.*

The motto which we quote above is printed on the title-page of the little pamphlet before us, and it is exceedingly appropriate. We have already told our readers how the editor of the *Practitioner* and the analytical chemist on the staff of the same magazine went out for the purpose of committing murder and only got as far as suicide. Condy's Ozonised Water was the object of their attack; an analysis was made and results were published, but from what has since appeared, there can be little doubt that the examination was carelessly or ignorantly performed. Mr. Condy entered into a correspondence with the editor, but although he extracted from him an admission that a second analysis gave different results from the first, Dr. Anstie maintained stoutly the absolute correctness of both, and denied justice and courtesy to the opponent he had injured. Mr. Condy has, therefore, had the whole of the correspondence between himself and Dr. Anstie printed, a proceeding for which under the circumstances he has abundant warrant. The most amusing part of the controversy is to note the evidently *bonâ fide* conviction which Dr. Anstie holds all through of his own infinite superiority in the art of courteous letter-writing. He closes the correspondence on his side with the following characteristic paragraph :—

"In reviewing the whole controversy, I must take occasion to remark that I have stretched courtesy towards yourself to its very limits. Nothing could have been less offensive than the manner of our original report, whereas it would have been easy, and justifiable, to have spoken in severe terms of the use of the title 'Ozonised Water.' You, on your part, have cast the most unmannerly imputations on our good faith and truthfulness. That is a matter of very small consequence to me; but it is sufficient to make me decide to abstain entirely from further correspondence about this question."

In a pithy rejoinder to this Mr. Condy sums up the dispute, one aspect of which we give in his words.

"I charged you (he writes) with erroneously stating that Condy's Ozonised Water is 'chiefly composed of permanganate of soda with some potash,' whereas, in reality, it is a solution of permanganate of lime. You answer that each of two analyses which had been made for you showed that the preparation in question, 'so far from being a simple permanganate, contains a mixture of several different salts, but that the second analysis showed a greater preponderance of one particular element, permanganate of lime, than was found in the sample analyzed previously to the publication of the report.' Considering that the first analysis showed no lime at all, this reads very like a disguised admission that the analysis on which you based your report contained the error with which I charged you. It is no longer doubtful that until I informed you of the composition of my preparation you were in ignorance that it contained lime, as your analyst also apparently was. It is therefore clear that your chemical adviser led you into an error, which you are unwilling frankly to admit."

There is no clause in the Ten Commandments specially exempting analytical chemists or journalists from the duty of obedience to them. "Thou shalt not bear false witness," is binding also on gentlemen in the medical profession. We are quite ready to believe that the analysis in the *Practitioner* was published in perfect good faith. For the reputation of his magazine the Editor would naturally prefer that it should be accurate. But if we may form a judgment from his letter published in this pamphlet, we cannot think that he still trusts his first analysis implicitly. Common justice demands in that case an acknowledgment of his error as prominent as its publication.

Mr. Silverlock has lately published a novel sort of account book under the title of "Johnson's Compendium Form for Trade Receipts and Disbursements." It is ruled and planned to show the transactions of a retail business for every day throughout a year, and it is so arranged that the expenses are shown under respective headings in different columns. By simply carrying out the totals for each thirteen weeks we get a quarterly abstract of affairs, and the annual balance-sheet is just as readily obtained, except that it, of course, involves the necessity of making an estimate of stock. The book contains plans both for the quarterly and the annual statements. Where a perfect set of books is not insisted upon, this compendium will prove an excellent record of each day's business, and even with an exact system of book-keeping its arrangements present advantages which will fully compensate for the slight amount of trouble involved in attending to it. It is already interleaved with blank paper, but we would suggest that in a future edition it might be also interleaved with blotting-paper which would make it worth quite an extra sixpence.

PATENTS

[The following list has been compiled expressly for the Ironmonger, by L. de Fontainemoreau, Patent Agent, 4, South-street, Finsbury, London; 10, Rue de la Fidélité, Paris; and 33, Rue des Minimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

2784. W. Fletcher, of Ilkeston, Derby. Improvements in apparatus for measuring liquids. Dated 22nd October, 1870.

23. H. Larkin, of Theydon Gernon, Essex, and W. White, of Hampstead. Improvements in the manufacture of sodium and potassium, and in apparatus employed therein. Dated 5th January, 1871.

33. E. T. Hughes, of London. Improvements in plumbago presses. Dated 6th January, 1871.

79. H. Kenyon, of Manchester, and J. Swindells, of Warrington, Lancaster. Improvements in the production of sulphureous, sulphuric, and hydrochloric acids, and products arising therefrom, such as the sulphates of soda, magnesia, potash, and alumina; alum, oxide of alumina, the chlorides of potassium and sodium, phosphate and phosphite of lime and ochre. Dated 12th January, 1871.

105. E. Sonstadt, of Port Lowdigue, Isle of Man. Improvements in the manufacture of the acetates and carbonates of sodium and potassium. Dated 14th January, 1871.

167. B. J. Bing, of Finsbury-place, South. Improved means of securing artificial teeth in the mouth. Dated 23rd January, 1871.

176. E. Madge, of Swansea, Glamorgan. An improved mode of, and apparatus for, creating and maintaining a circulation of liquids in chemical manufactures. Dated 23rd January, 1871.

191. M. Chapman, of Goswell-road. Improvements in cases or cabinets for liqueur bottles and glasses. Dated 25th January, 1871.

217. R. A. Gooding, of Manchester. An improved cork drawer. Dated 27th January, 1871.

237. G. H. Funck, of Fenchurch-street. Improvements in apparatus applicable to vessels for containing volatile oils and spirits and other liquids. Dated 30th January, 1871.

351. C. Baly, of Gray's Inn. Improvements in the chemical means, apparatus, and machinery employed in deodorizing, disinfecting, and converting into superior manure the sewage and other fæcal matters, whether human, animal, vegetable, solid or liquid, or the blood of animals, or other refuse matter, derived from various sources. Dated 10th February, 1871.

359. H. J. F. H. Foveaux, of the Strand. An improved automatic valve for arresting the discharge of liquid from a reservoir while the level of the liquid is yet above the outlet. Dated 13th February, 1871.

289. A. V. Newton, of London. Improved machinery for manufacturing lozenges. Dated 2nd February, 1871.

305. J. Church, of Glasgow. Improvements in distilling, and in apparatus therefor. Dated 4th February, 1871.

309. W. R. Lake, of London. Improvements in the manufacture of condensed soup. Dated 4th February, 1871.

324. T. Rowau, of Glasgow. Improvements in pigments. Dated 8th February, 1871.

334. T. Holland, of Chorley, Lancaster. Improvements in the preparation of colouring matters for dyeing and printing. Dated 9th February, 1871.

364. E. McConville, of Manchester. Improvements in the manufacture of sulphuric acid. Dated 14th February, 1871.

452. G. Haseltine, of London. An improved method of, and apparatus for, carburetting atmospheric air. Dated 21st February, 1871.

466. F. Foster, of Islington. Improvements in apparatus for forming screws upon the necks of bottles, and for charging bottles with aërated liquids; also for stoppers for retaining and drawing off such liquids. Dated 22nd February, 1871.

470. T. J. Smith, of London. Improvements in the production of chlorine. Dated 22nd February, 1871.

472. G. Haseltine, of London. Improvements in apparatus for carburetting atmospheric air. Dated 22nd February, 1871.

487. J. R. Liston, of New Malden, Surrey. An improved glove to be used in certain medical and other operations where it is necessary to preserve the skin from danger, and yet retain the sense of touch. Dated 23rd February, 1871.

491. T. J. Smith, of London. Improvements in the nitrification of ammonia. Dated 24th February, 1871.

507. J. M. Douglas, of Fenchurch-street. Improvements in the manufacture of oils, tallow, soap, and other similar products. Dated 25th February, 1871.

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* "A Chapter in Criticism. Practical Chemists and Therapeutical Critics." London: Hardwicke.

514. A. Lloyd, of Camden Town. Improvements in farinaceous food and baking powders. Dated 25th February, 1871.
520. A. A. Cochrano, of Westminster. Improvements in the application of bituminous compositions for sanitary and other useful purposes. Dated 27th February, 1871.
526. R. Fennelly, of Wellington Chambers, London-bridge. Improvements in preserving animal substances for use as food. Dated 27th February, 1871.
557. C. De Negri, of St. John's Wood, and E. Craddo k, of Barnsbury. Improvements in machinery for the expressing of oils and other liquids. Dated 2nd March, 1871.
568. J. Briggs and J. Bailey, both of Whitecross-street. Improvements in apparatus employed in the production and manipulation of aërated waters. Dated 3rd March, 1871.
624. T. Gibb and C. Gelstharp, both of Jarrow-on-Tyne. Improvements in treating metallic solutions and precipitates. Dated 9th March, 1871.
690. A. Robertson, of Glasgow. Improvements in applying heat or cold to the human body, and in the apparatus or means employed therefor, such apparatus being applicable as pessaries or dilators. Dated 15th March, 1871.
720. C. Wigg, of Liverpool. Improvements in the manufacture of alkali, and in apparatus employed therein. Dated 17th March, 1871.

Letters Patent have been issued for the following :—

2175. J. C. Young, of Warrington, Lancaster. Improvements in apparatus for fastening and securing cupboards or receptacles for containing poisons or other chemical preparations, which invention is also applicable to other similar purposes Dated 4th August, 1870.
2281. J. J. Shedlock, of Upper Holloway. Improvements in treating and purifying animal and vegetable fats and oils, and in apparatus connected therewith. Dated 18th August, 1870.
2297. J. J. Hays, of Hertingforbury, Hertford. Improvements in purifying, deodorizing, and utilizing sewage and other refuse, and deleterious matters, and for machinery therein employed. Dated 20th August, 1870.
2399. E. A. Parnell, of Swansea, Glamorgan. Improvements in the manufacture of soda. Dated 2nd September, 1870.
2401. W. R. Lake, of London. An improved process for extracting caustic soda and potash, and the carbonates of the same from their solutions Dated 2nd September, 1870.
2458. T. Harvey, of Clement's-lane. Improvements in continuous distilling apparatus for distilling petroleum and other kinds of oil. Dated 12th September, 1870.
2516. G. Bischof, of Craven-street, Strand. Improvements in the means employed for the purification of water. Dated 19th September, 1870.
2526. T. E. Bond, of Birmingham. Improvements in apparatus or machinery for the manufacture of certain kinds of sweetmeats and lozenges Dated 20th September, 1870.
2539. S. S. Brown, of Portsmouth. Improvements in machinery or apparatus for the manufacture of lint and lint bandages. Dated 22nd September, 1870.
2568. H. Highton, of Putney. An improved method of preserving meat, fish, and other alimentary substances. Dated 26th September, 1870.
2577. J. I. Bengough, of Hackney. An improved process for preserving animal and vegetable substances in airtight vessels. Dated 28th September, 1870.
2823. P. Spence, of Manchester. Improvements in the manufacture of sulphuric acid, and in apparatus connected therewith. Dated 27th October, 1870.
3378. G. Haseltine, of London. An improved mode of, and composition for, preserving fruit. Dated 27th December, 1870.
232. J. W. Butler, of Savile-row. Improvements in stoppers for bottles, jars, and other like receptacles. Dated 28th January, 1871.

Specifications published during the month. Postage 1d. each extra :—

1870.

1650. A. Piccaluga. Iced beverages. 10d.
1700. R. Blackbee. Surgical instruments. 8d.
1749. A. S. Stocker. Bottles and stoppers. 1s. 2d.
1783. W. E. Newton. Obtaining glycerine from spent lyes. 4d.
1789. D. Forbes and A. P. Price. Preparing manures. 4d.
1800. J. Sinclair. Respiratory apparatus. 10d.
1823. R. Kell. Treating and distilling petroleum. 8d.
1845. H. Medlock. Separating aqueous from oleaginous substances. 6d.
1848. E. G. Brewer. Preserving animal and vegetable substances. 4d.
1863. R. Pinkney. Producing colours from aniline. 4d.
1871. J. A. McIntosh. Distilling oils. 4d.
1892. M. Cahen. Absorbing sulphurous fumes, etc. 4d.
1900. J. H. Johnson. Evaporating and boiling or concentrating liquids. 1s.
1903. E. T. Hughes. Caustic Soda. 4d.
1905. G. Burney and C. Ingall. Storing petroleum, etc. 4d.
1917. E. L. C. D'Ivernois. Electric light. 4d.
1937. R. Hutchison. Bleaching oils and fats. 4d.
1942. W. G. Jackson. Cordials. 4d.
1949. P. Spence. Treating sewage. 4d.
1952. W. Marriott. Manufacture of iron salts, etc. 4d.
1972. S. Putney. Spinal supports for railway travelling. 4d.
2032. H. M. Ramsay. Treating sewage, etc. 4d.
2046. J. E. Duyck. Treating mineral oils. 4d.
2047. J. H. Lloyd. Utilizing and deodorizing sewage matters. 4s. 8d.
2049. G. Phillips. Preparing charcoal for decolorizing syrups, etc. 4d.
2064. R. T. Shiells. Preserving vegetable matter. 4d.
2065. J. H. Johnson. Production of sulphuric and hydrochloric acids, etc. 4d.
2095. H. Brooks. Stoppers for bottles, etc. 1s. 8d.
2096. W. G. Gard. Preserving meat, etc. 4d.
2111. P. C. Don. Manufacturing carbonate of soda. 4d.
2122. E. Vignier. Distilling. 1s.
2151. J. Dewar. Food for animals. 4d.
2238. W. James. Tapping casks. 4d.
2435. E. R. Southby. Distilling mineral oils. 10d.
2892. U. K. Mayo. Artificial teeth and plates. 8d.
3182. G. T. Bousfield. Manufacture of rosin oil. 4d.

THE PROPOSED POISONS REGULATIONS.

THE Council of the Pharmaceutical Society having capitulated to the universal expression of dissent to their conduct respecting the Poisons Regulations, it is of the less importance that we should fill our pages with that one subject. For many reasons, however, it is desirable that this journal should contain a summary of the proceedings in connection with the attempted enactment, and we have therefore condensed from the reports which have reached us the following abstracts. The correspondence on this subject, which is selected and printed on another page, we may also add, is but a fraction of that which lies before us.

METROPOLITAN CHEMISTS' DEFENCE ASSOCIATION.

The chemists and druggists of London inaugurated a Defence Association, for similar objects to those of the Manchester Society, at a meeting of the trade held at Freemason's Tavern on Monday, March 20th. The meeting was convened by circular, wherein it was stated to be held "in anticipation of the public meeting at Bloomsbury-square, to consider the steps most desirable to be taken in connection with the proposed Poisons Regulations; and at the same time to make choice of a few gentlemen whose election upon the next Council should be urged."

The circular bore the signatures of Messrs. S. C. Betty, John R. Collins, W. W. Urwick, George Cawdell, Edwin B. Vizer, John Wade, John Beddard, and Thomas D'Aubney.

The CHAIRMAN described the present as an exceptional occasion. The Council was not simply a body of delegates, but of gentlemen elected to sit in council and inaugurate public measures for the promotion of pharmaceutical institutions. He gave the utmost credit to the present Council for a desire to do its duty in this matter, a duty urged by a chivalrous sentiment of plighted honour; but there appeared very strong reasons why, with the passing of the Pharmacy Act, whose essence and intention was educational, the days of hostile motions for poisons regulations should be departed.

Mr. COLLINS moved the first resolution :—

"That in the opinion of this meeting the advanced educational qualification of chemists and druggists, as provided by the Pharmacy Act of 1868, together with their personal and legal responsibilities, render any 'compulsory' regulations for the storing and dispensing of poisons unnecessary and undesirable, and, as a protection to the public, illusory. And this meeting affirms that whilst it would regard any well-digested 'Recommendations' upon the subject with attention and respect, it pledges itself to oppose most strenuously the proposed 'compulsory' regulations of the Pharmaceutical Council."

Mr. COLLINS briefly sketched the history of the Pharmaceutical Society, its aims, and the educational results which it had attained. He considered the Regulations now proposed were contrary to the spirit of the Society's action during the last thirty years. He regarded them as unnecessary, because the whole training of a chemist and his business interests were sufficient to induce him to take what he should regard as the best precautions. For his part he would be very pleased if the Council would issue such regulations in the form of recommendations, and if he found in them any improvements over the system which he already adopted, he would gladly accept the hints. It was compulsion to which he objected. He commented on the wrath manifested in the journal towards the proprietors of a contemporary for having undertaken to ascertain informally the opinion of the trade; but as a member of the Society he regarded it as bad policy to ignore the 10,000 "outsiders," as they were formerly called. The Council knew well enough that those 10,000 were quite sufficiently powerful to prevent the passage of a Pharmacy Act until they had agreed to its terms.

Mr. URWICK seconded the resolution. He said there were three parties to the Pharmacy Act—the Government, the Pharmaceutical Society, and the 10,000 outside members of the trade—and he thought it unfair that two of those parties should go, as it were, behind the back of the third and commit the whole to compulsory regulations. It was merely compulsion to which he objected.

Mr. PAGE considered the action of the Council as puerile interference.

Mr. Bland said angular bottles could not ensure safety. Perfumers were in the habit of adopting bottles of curious construction.

Mr. Fitch said it would be unfair that customers should be prohibited from purchasing certain drugs at a chemist's shop, except under certain restrictions, while they would be at liberty to obtain them at the apothecary's. He also stated that at the annual meeting it was his intention to draw attention to the urgent necessity of enforcing the provisions of the Pharmacy Act. He knew a herbalist who showed about two pecks of cantharides in his window, and retailed them to all buyers at 6d. per ounce.

Mr. Vizer thought the tendency of compulsory regulations was to turn intelligent men into mere machines, in this case, to be worked by a central power in Downing-street. It was necessary to protect ourselves from our friends. The object of the Defence Association was merely to oppose the enactment of compulsory regulations, and not to form a society inimical to the Pharmaceutical body. He ridiculed the statement in the circular issued by the Council, to the effect that if chemists would agree to let these regulations pass, they might depend that no vexatious proceedings would be instituted. This was absurd and weak. If they were to be issued as compulsory he should hold up both hands for their being enforced as such, and not carried out in the same careless manner as the Pharmacy Bill, by which while the educated chemist was precluded from selling, the ignorant oilman might do so with impunity. The conscientious pharmacist who endeavoured to act according to law would be placed at a disadvantage with his more reckless neighbour who cared nothing for the law. It was untrue that the public was clamouring for the regulations. He did not remember that any customer had ever seriously asked him how he kept his poisons, and he thought the *Pharmaceutical Journal* should have shown a more independent front towards the medical journals, and not have allowed such articles as have lately been published to have been reprinted in its pages without one word of comment. Had the Council at first represented to Mr. Simon the improving educational position of the chemist, and the gradual dying out of the old leaven, together with the extreme rarity of accidents arising from preventable causes, he (Mr. Vizer) did not doubt that Mr. Simon would have readily seen the force of such representations. The resolution was then put and carried unanimously.

Mr. Quiller moved the second resolution:—

"That an association be formed, to be called 'The Metropolitan Chemists' Defence Association,' instituted to protect the London trade from 'compulsory' regulations for the storing and dispensing of poisons, and to co-operate with provincial associations organised for the same purpose."

He said he would not lend his influence to any association which had for its object permanent hostility to the Pharmaceutical Society. Acts of Parliament were likely to make men less careful, by removing some portion of the sense of responsibility.

Mr. Wade seconded the resolution. He said the immediate business of this Association was to remedy an abuse. The Council was endeavouring to enforce these Regulations in the face of an almost universal opposition, and it therefore became our duty to resist our representatives. The Regulations would be far more vexatious in the country than in London, but London chemists ought not to be behind those in the provinces. They wanted the new Council to sweep these regulations away never to appear again.

The remaining resolutions, all carried unanimously, but occasioning little discussion, were as follows:—

Moved by Mr. Pattison, seconded by Mr. D'Aubney—

"That an honorary secretary and treasurer, an executive committee consisting of twelve members of the Association (four to form a quorum), and a general committee, with power to add to their number be appointed."

Moved by Mr. Bland, seconded by Mr. King—

"That Mr. Vizer be appointed hon. secretary, Mr. S. C Betty, treasurer, and the following gentlemen members of the executive committee:—Messrs. J. Beddard; J. Bland; J. R. Collins; Thos. D'Aubney; H. Froome; G. Greenish; H. King; J. Owen; G. Pattison; J. R. Quiller; W. W. Urwick; J. Wade.

Moved by Mr. Lynch, seconded by Mr. Cawdell—

"That every suscriber of 2s. 6d. be a member of the Association."

Moved by Mr. Vizer, seconded by Mr. Bland—

"That the executive committee be requested to make choice of such gentlemen as they may consider would represent the correct feeling of the trade and its general requirements, and this meeting pledges itself to support their candidature at the forthcoming election of the Pharmaceutical Council."

In moving this last resolution, Mr. Vizer pointed out as a singular coincidence that the ballot for those members of the Council who would remain had left country members alone thereon. As all the committee work had to be done by London members, he thought it important that the new members should chiefly be residents of London.

It was announced that Messrs. Lynch and Co., of Aldersgate-street, had contributed two guineas to the funds of the Defence Association. Intending members were invited to send their subscriptions to the hon. secretary, Mr. Vizer, 63, Lupus-street, S.W.

A vote of thanks to the Chairman concluded the proceedings.

Since the meeting, the Association has resolved to draw up a memorial to the Pharmaceutical Society, and has asked from every registered chemist and druggist in London and suburbs authority to add his name to the same. The reasons for still deciding to present this memorial at the annual meeting are explained in the following letter which we have received from the Honorary Secretary:—

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—How great a change has come o'er the spirit of the scene! The turbulent waters which but yesterday threatened to involve us in another storm have suddenly subsided into an apparent calm, by a most unexpected reversal af all the protestations of the past two years, and the efforts of the Manchester, Metropolitan, and kindred Associations are thus rewarded with a well-earned victory.

Whilst we hail with the utmost satisfaction this fresh evidence that "in the multitude of counsellors there is safety," we would at the same time remind ourselves and our friends that the victory is not yet complete, the terms of peace are not yet signed, and that after all it may be but an armistice; for although the Council has, in the face of so strong and determined an opposition, given way, we have not yet received an assurance that their change of opinion "will fully satisfy the requirements of the legislature." It hence becomes us not hastily to withdraw from the position we have secured, but on the contrary to hold fast that position, and to avail ourselves of every opportunity and means of impressing upon the Council the wisdom of its act in thus holding forth the emblems of peace.

I would therefore desire, through your kindness, by the insertion of this letter, to urge upon the "registered" chemists and druggists in London and its suburbs, who before the issue of your journal will all (unless by oversight) have received a copy of the memorial herewith enclosed, to forward to me as soon as possible their authority to append their names to the original document for presentation in May.

I apprehend that nothing could be more satisfactory to the Council, under existing circumstances, than such a confirmative evidence that it has acted in strict accordance with the general feeling of the trade; and instead of looking upon it as in any way a hostile act, it would be regarded as the most perfect evidence of the approval of those who otherwise possess no means of unitedly expressing their opinion.

Hoping, therefore, that our friends will freely respond to the invitation of the Metropolitan Chemists' Defence Association,

I am, Sir,
Faithfully yours,
Edwin B. Vizer, Hon. Sec.

63, Lupus-street, Belgravia South, April 8, 1871.

[Mr. Vizer (in a letter received just as we are going to press) has asked us to add that the Association will also be glad to have the authority of provincial chemists and druggists to add their names to a similar memorial for the same object.—Ed. *C. & D.*]

"MEMORIAL TO THE COUNCIL OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

"We, the undersigned registered chemists and druggists of London and its vicinity, possessing no official means of recording our votes upon the proposed Compulsory Regulations for the Storing and Dispensing of Poisons, desire by this present memorial to the Council of the Pharmaceutical Society, to record our distinct disapproval of any compulsory legislative enactment upon the subject; considering that the precautions at present used by the trade generally, as proved by the very perceptible decrease of accidental poisoning, justify our protesting against so unnecessary an interference with the discharge of our business duties.

"Whilst we thus distinctly deprecate any 'compulsory' regulations, we would add that should your Council consider it desirable to issue, from time to time, any well-digested suggestions upon the subject, such suggestions would be received by us with attention and respect.

"We therefore await with the greatest interest the result of the Pharmaceutical vote upon this most important question.

"Signed"

LIVERPOOL.

A meeting of the chemists and druggists was held at the Royal Institution on Thursday evening, the 16th March, "To consider the proposed Compulsory Regulations for the Keeping, Storing, and Dispensing of Poisons."

Mr. **Edward Davis**, F.C.S., in the chair. The Chairman said he was not affected in any way by the question for discussion, and was therefore unbiassed in his opinions. The meeting, though called by the Council of the Chemists' Association, was not connected therewith, but the resolution would be the voice of the chemists and druggists in Liverpool.

The **Secretary** read the circular convening the meeting; the proposed compulsory Poison Regulations; and several letters of apology from those unable to attend, each of which expressed strong protests against legislative interference.

Mr. **Redford** said that he had taken the course which had resulted in the present meeting being convened from a sense of duty, but he thought it must be a matter of deep regret to all who sympathized with him, that they should be compelled to take up a position of seeming opposition to the Council of the Pharmaceutical Society, and to the proposed "Poisons Regulations." But an attitude of defence now was justifiable, and, he maintained, must be assumed. It was said that ten thousand of the trade were "outsiders," and were unrepresented, and so without voice in the Society's councils. This large body of Englishmen had feelings, opinions, and rights, which, if hurt, ignored, or invaded, must drive them into a position of defence. The qualifications of the Council for framing "Poison Regulations," and the weight of their recommendation, were probably indisputable. Perhaps the "Regulations" were unexceptionable; without conceding that, however, he thought that was not the question now. He would not dissuade any man from adopting safeguards which commended themselves to that man's judgment, but he contended strongly for freedom. "Let our judgments," he said, "be free and unfettered; throw on us all the responsibility you can heap, and compel us to pass crucial educational tests of the severest examinations of any college in Christendom, but spare us the ignominy of being compelled in addition to adopt artificial material expedients to obtain an imaginary immunity from accidents, which it has been one great aim of our education to secure, and which that education is the only good and safe means of securing." He then commented on some of the results which would follow the enactment of such a measure, and commended the issue of non-official voting-papers to the whole trade from the Chemist and Druggist office, by which he hoped all would express their opinion. He begged to move the following resolution:—"This meeting having fully taken into consideration the proposed *compulsory* Regulations for the keeping and dispensing of 'Poisons,' strongly protests against such regulations being passed at the annual meeting in May next, and further hopes that the members present at the said annual meeting will unanimously reject the same."

Mr. **Shaw** seconded the resolution, and observed that its construction implied that the meeting had well considered the proposed Regulations, otherwise he should have been tempted to dispense with any further argument *pro* or *con*, seeing that the subject had already been debated almost to the death during the past year. He strongly insisted that there was no evidence before the country at the present time proving the necessity for *legal enforcement* of such Regulations. Education was the most effective safeguard against accidents by poisoning. The absurdity of applying these Regulations to chemists and druggists only, was illustrated by the statement that upwards of 200,000 packages and bottles of medicine were sent out by the Liverpool dispensaries alone, to the lowest class of the population, during the past year. Having alluded to the opinions of Jacob Bell on this question, Mr. Shaw concluded by quoting from Mr. Ince's letter in the Chemist and Druggist.

Mr. **Abraham** at this point rose and objected to Mr. Shaw reading Mr. Ince's letter, without he also read Mr. Groves's on the other side of the question.

Mr. **Shaw** said he had not the least objection to Mr. Abraham reading Mr. Groves's letter, if he thought it desirable to do so; but he would content himself by reading that from Mr. Ince.

Suggestions were then made that the pith of Mr. Ince's letter might be given, to which Mr. Shaw replied that the letter was pithy from beginning to end, and that, if he gave the pith, he must give the whole; however, as the time was limited, he contented himself with reading the latter portion of it, and concluded by seconding the resolution.

Mr. **Abraham** argued for the Regulations. He said that the provisions of the Act affecting the sale of poisons were introduced during its passage through Parliament. The struggle was, not as to the question whether compulsory regulations were to be made,—upon which point both parties in the State appeared to be agreed,—but on the question *who should make them*. The present Chancellor of the Exchequer (Mr. Lowe) and the present Home Secretary (Mr. Bruce) were of opinion that the Privy Council should be empowered, but Mr. Headlam said that the Privy Council had introduced the words "Pharmaceutical Society, with the consent of the Privy Council," as the proper persons, and he supported that view. So also did Lord Robert Montague and others; Mr. Alderman Lusk saying, in reference to the schedules, "that he had no fear of the Pharmaceutical Society not doing their duty." The Act passed, and the Privy Council, who possessed a co-ordinate authority, called on the Pharmaceutical Society to make the Regulations contemplated by it. The question was, what duty, good faith and prudence required them to do. These being the facts, what would follow the rejection of Regulations? Was it not almost certain that Government would seek new powers, and that another hand than their own would frame the Regulations, and seeing how unwilling the Pharmaceutical Society was to adopt them, that their adoption would been forced by inspection? And who would the inspectors be? The Privy Council was empowered to appoint a visitor to watch the examinations of the Society, and had appointed not a pharmacien, but a medical man. He believed that if all regulations were rejected by the Pharmaceutical Society, the result would be that they would be enforced upon them, and that a medical man would be authorized to come behind every one of their counters. On the other hand, what was it they were afraid of? He could not conceive any difficulty in observing the Regulations. He observed them himself, but if it could be shown that in any shop in the kingdom they could not be easily observed, they ought not to pass without amendment; and he did think that the Regulation with respect to dispensing required amendment. No power but Parliament could authorize inspectors to visit them; if they acted in harmony with the Privy Council, he believed that no attempt would be made to do anything of the sort, but if they set at defiance the expressed wishes of Parliament and of the Privy Council, he had already intimated what he thought would follow. If he thought that there was the least prospect of their being able to influence the Privy Council he would be glad to join in representing the objections which were so strongly entertained.

Mr. **Charles Symes**, Ph.D., said that education was not in all cases sufficient; educated men sometimes make mistakes. This was a question in which *principle* and *honour* were involved; to inquire into it was part and parcel of our *arrangement* with the Government at the passing of the Act, that *some compulsory regulations* should be adopted. We had made a bargain (a bad one, if you like to think it so) as binding as any between man and man, let us then in all fairness as *honourable and honest* men carry it out. The fact of this law not applying to the surgery, and that medicines and lotions were sent from it in similar bottles, would only serve to make more vivid that line of demarcation which already faintly exists in the public mind, and would be of considerable benefit to us. Mr. Symes then moved the following amendment—"That this meeting approves of the proposed Poison Regulations as suggested by the Pharmaceutical Council."

Mr. Wright said that for the sake of seeing how many would support it, he would second the amendment, though he should vote against it.

The resolution was supported by Messrs. Sumner, Ball, Jones, Holt, Wright, and was carried by a large majority.

Three votes only were recorded for the amendment.

Mr. Hampson, of Manchester, who attended as a delegate from the "Chemists' Defence Association," being called upon, urged the importance of united action; he invited those present to join the Association, and several members were enrolled.

GLASGOW.

The chemists and druggists of this city met at the West Hall, Anderson's University, on April 3rd, to consider the proposed enactment. Mr. T. Davison presided.

The Chairman said he would have preferred that some other person who could have maintained a more neutral attitude than himself should have been appointed Chairman. The proposed Regulations were put forth for the avowed object of securing the safety of the public, but if so, he could not see why surgeon-druggists should be exempted, and more especially as in Glasgow, where medical practitioners had by far the largest share of dispensing. In Scotland there were few cases of poisoning from carelessness on the part of chemists, and even in England they were comparatively few. In proof of this he might mention that it had been authoritatively stated that out of 300 cases of poisoning which occurred within a limited period, only twenty-five or twenty-six resulted from carelessness, and out of that number it is a question whether any one was caused by the carelessness of duly qualified chemists. If the Pharmacy Act of 1868 had been adopted in its entirety, the result would have been for all surgeons who kept open shop to get themselves registered under the Act as chemists and druggists, and they then would have been liable to the same restrictions; but the amended Act of 1869, he believed, was intended for no other purpose than to have medical practitioners entirely exempted from the operations of the act of 1868.

Mr. John Jaap, Ph.C., then moved the first resolution as follows:—"That this meeting is opposed to the restrictive measures for the sale and keeping of 'poisons,' recommended by the Council of the Pharmaceutical Society (with consent of the medical officers of her Majesty's Privy Council), for adoption at the annual meeting in May next, as we consider it is highly impolitic to interfere in any way with the conducting of our business, otherwise than as recommendations; and being convinced that the greatest security for the public lies in the education of the dispenser, such education being now not only improved, but made a necessary qualification, is to all intents and purposes a guarantee of our ability to conduct our business for the public safety."

Mr. Daniel Frazer, Ph.C., in seconding the resolution, did so with no hesitation, because he held very decided opinions on the subject. He would, however, go this length in saying that he thought it was necessary that there should be some means taken by all chemists to distinguish poisons which resembled one another in appearance; he would go further, and say that it was quite right that the public should have some security against accidents happening. But he wished to be at liberty to accomplish that object himself as best suited his circumstances, without any undue interference on the part of the Privy Council, and he also wished his brethren in trade to be on the same footing.

Mr. Alexander Kinnimont, Ph.C., moved the second resolution as follows:—"That this meeting is further opposed to the proposed compulsory Regulations, as their adoption by the Society in their present form will tend to give an undue and invidious advantage to one class of retailers over another, creating, in fact, a body of 'privileged traders; for, while the Regulations will be binding *only* on those registered under the Pharmacy Act, all persons registered under the medical Acts will be exempted, and at liberty to act as they think proper, it being the custom of many medical practitioners throughout the country to keep open shop and carry on a retail trade in the same manner as chemists and druggists, and as especially in this city fully two-thirds of the drug retailers are physicians." It was a great anomaly that in a city such as this, out of 180 retailers of drugs 120 were medical practioners; and if the regulations were enforced, these 120 would be at liberty to adopt them or not, as they liked, while the remaining sixty would be compelled to do so—and yet there was, practically speaking, no difference between their establishments.

Mr. D. P. Walker seconded the motion, and said that he thought it was now time the dispensing of medicines should be taken out of the hands of medical practitioners altogether. It was a disgrace to a city like Glasgow, that boys of eight and twelve years of age, and sometimes girls, were all that could be seen at the back of the counters of these doctors' shops from morning till night.

Mr. Black wished to know whether all who kept open shop for the sale of poisons were not equally liable to the same restrictions as chemists. He would like to know if any decided information had been obtained on the subject. He believed that the medical men generally held that they were not liable, while some chemists he had consulted with held that they were in the same position as chemists and druggists in that respect.

Mr. Harvie (Airdrie) said he thought he could supply the desired information. He had always been of opinion that medical men who kept open shops came under the poison clauses of the Pharmacy Act, the same as druggists, which to all intents and purposes they are, so far as the sale of poisons is concerned, at least, and he naturally thought they should act in the sale of poisons the same as they who were professed druggists. But while he held this opinion, a medical man who had a shop near him thought differently, and said he would sell as much poison as he could, and would register none of it. He (Mr. Harvie) told the doctor that if he persisted in doing so he would make a case of it, while the doctor said he was quite agreeable. A party called shortly afterwards at his shop for half an ounce of corrosive sublimate; he not knowing the man, asked him to get a witness. The man said he needed no witness, and could get it at Dr. So-and-So's. He (Mr. Harvie) said he would better not go there without a witness either, otherwise, the consequences might be serious to himself. The man paid no attention, however, but went straight to the doctor's shop, to which he followed him, and saw the doctor weigh the corrosive sublimate, wrap it up, and hand it over his counter *without even a label*. He called a policeman at once, gave him in charge, and lodged the case with the Procurator Fiscal. The Fiscal wrote to Edinburgh for instructions, and in a day or two a reply came from a Mr. Kimberly, giving orders not to proceed with the case. It was thus decided in favour of the doctor, and he continues to sell poisons without registering them, and in many instances not even labeling them. If the Pharmacy Act was so impartial in its operation already, how much more so would it be if these additional clauses became law? He ventured to characterize the whole Act as an anomaly of the most absurd nature.

Mr. John Currie, Ph.C., proposed the third resolution as follows:—"That this meeting, being convinced that it is impossible to frame a set of rules equally suited to the varied requirements of different pharmaceutical establishments, and because we feel that no restrictions under the authority of the law are likely to prove successful, we hereby resolve to give the proposed *compulsory* Regulations our most strenuous opposition, while we will respectfully consider any well-devised scheme if sent out as a recommendation, and act in accordance therewith, so far as our circumstances will permit."

Mr. Glen (Renfrew) seconded the motion.

Mr. Hamilton, M.P.S., supported the motion. He said one great objection he had to the action of the Council was the persistent manner in which they had brought the Regulations forward, without first consulting the feelings and wishes of the entire trade. He hoped that the action taken at this time would be a lesson to future councillors not to drag the Society into such unnecessary agitation again.

Mr. Black moved the fourth resolution, as follows:—"That an association be formed to be called the 'West of Scotland Chemists' Defence Association,' to co-operate with similar organizations in opposing all compulsory and partial legislation, that every contributor of 2s. 6d. and upwards be a member, and that a general committee be appointed, to have full power to adopt such means as they may consider necessary to attain the objects of the association."

Mr. J. M. Fairlie, M.P.S., said that Mr. Abraham (of Liverpool) and others had said that an understanding was come to with Parliament during the passing of the Pharmacy Act in 1868 that regulations *were* necessary. He himself remembered well the passing of the Act, and also the poison clauses that were tried at that time to be inserted into it, but when they were withdrawn he thought we should hear no more of them. As to the point argued that it was then understood also that the Pharmaceutical Society was the proper party to make such regulations, it seemed to him an excuse for getting them conveniently shelved; at all events, it showed that the chemists and the country had put a great amount of confidence in the Society at that time, but he would ask, has that confidence been maintained? Then, again, "the Society is the proper party to make regulations." But are they being allowed to exercise that privilege? Is it not a fact that some members of the Council wish *their* ideas to be the will of the Society? And is it not also a fact that the Privy Council have added the most obnoxious clause to the Regulations?

Mr. Carr (Dumbarton) supported the resolution.

Mr. Greig moved that the following gentlemen constitute the committee, with power to add to their number, viz., Messrs. D. Frazer, J. Jaap, A. Kinninmont, J. Black, T. Davison, J. Currie, J. Hamilton, Alexander (Greenock), D. P. Walker, Harvie (Airdrie), Borland (Kilmarnock), Moore (Stirling), Carr (Dumbarton), J. M. Fairlie, and H. Hart; Mr. Davison, convenor.

Mr. Moore, Ph.C. (Stirling) seconded the motion.

Mr. Alexander, Ph.C. (Greenock) moved the following resolution, viz.:—"That the Committee be intrusted to prepare a memorial embodying the foregoing resolutions, which they give all chemists in the district an opportunity of signing, and present it to the members of the Pharmaceutical Society at their annual meeting in May, and to the Medical Department of the Privy Council."

Mr. Harvie (Airdrie) seconded the motion.

A general conversation then took place, with reference to other matters involved in the proposed Regulations, at the close of which the Chairman put the various resolutions to the meeting, which were unanimously agreed to.

On the motion of Mr. Carr (Dumbarton) a hearty vote of thanks to Mr. Davison for presiding brought the proceedings to a close.

BIRMINGHAM.

A meeting was convened by the Midland Counties Chemists' and Druggists' Association, on the 31st of March, to consider the Poisons Regulations.

Mr. C. J. Arblaster presided, and moved the following resolution:—"That from the correspondence between Dr. Simon and the Council of the Pharmaceutical Society, it appears that her Majesty's Privy Council insists on regulations being framed for the vending and dispensing of poisons; and it is the opinion of this meeting that the regulations proposed (with the exception of the third) by the Pharmaceutical Society are such as will be the least objectionable to chemists, and at the same time satisfy the requirements of the Privy Council."

After some remarks in support of the resolution by Mr. Dymond, it was seconded by Mr. Lucas, and carried by a majority of eight to four, two gentlemen remaining neutral.

A desultory conversation took place with regard to the attitude of the Pharmaceutical Society in this matter, and one of the persons present said that the Society only represented one in nine of the chemists throughout the country, and he wished to know why the nine should be overruled by the one. He answered the question himself by saying that the one was up and doing, while the nine were apathetic. Another person remarked that it appeared that the chemists and druggists were bound to obey the great Pharmaceutical Society, and that they themselves were nothing. Another ridiculed the idea of the druggists paying three guineas to enter the Pharmaceutical Society, and said there were many who could hardly pay their rent as it was. It was also remarked, and generally agreed to, that any regulations on the subject of poisons ought to apply to veterinary surgeons, and medical men dispensing their own prescriptions, as well as to druggists.

Mr. Brown and one or two others pointed out the difficulties of carrying into effect the proposed Regulations in poor neighbourhoods; and the opinion was expressed that had the chemists of Birmingham been at all fully represented, the Regulations drawn up by the Pharmaceutical Society would have been rejected by a large majority.

The Chairman stated that it was wholly the fault of the chemists themselves that there was not a larger attendance, as the meeting had been advertised, and 120 postal cards of invitation had been sent out.

The meeting terminated with a vote of thanks to the Chairman.

HULL.

A meeting of the chemists and druggists of this town and neighbourhood was held on the 15th of March.

Mr. Bryne presided. He (the Chairman) had no very strong objection to the Poison Regulations themselves, but he strongly objected to their being forced on him by law. He read the following memorial, which he hoped all the chemists and druggists of the neighbourhood would sign:—

"The undersigned chemists and druggists of Hull having had their attention drawn to the proposed Poison Regulations which the Council intend bringing before the annual meeting of the Pharmaceutical Society in May next, with a view to their adoption, hereby desire to record their dissent from the said propositions, and respectfully urge upon the Council the danger and impolicy of partial legislation on the subject of poisons; and your memorialists further desire to impress on the Council in the strongest manner that, in their opinion, no regulations can be deemed satisfactory to the trade which do not apply alike to surgeons, veterinary surgeons, hospitals, and dispensaries (by whom, by far, the greater portion of medicine is supplied), as well as to chemists. The third regulation is very objectionable, and has a direct tendency to favour the conclusion that any medicine not in a "danger bottle" is necessarily harmless, and it would probably lead to serious accidents. It is very questionable, in the opinion of your memorialists, whether any regulations, capable of universal application, can be devised which are likely to press with such constant force on the minds of chemists and druggists as that of the tremendous responsibility now existing."

Mr. A. Pickering then moved the following resolution:—"That this meeting, whilst fully recognising the duty of every pharmaceutical chemist and druggist to take all due precautions against mistakes and accidents, and securing the safety of the public when dealing with poisons or dangerous articles, does not consider the enforced adoption of the proposed Regulations for keeping and dispensing poisons to be either necessary or desirable; and that a memorial be prepared and presented to the Council, objecting to the proposed Poison Regulations."

This was seconded by Mr. C. B. Bell.

Mr. Gales moved as an amendment that the Privy Council and not the Pharmaceutical Society should be memorialized. The Pharmaceutical Society had a right by law to pursue any course they thought proper, and they had chosen to take no notice of the registered chemists and druggists. Their remedy, therefore, lay in the House of Commons.

Mr. A. Hester seconded the amendment.

Three only voted for it, and the original motion was then put and carried.

Mr. Myers proposed—"That whilst chemists generally would doubtless welcome, and, as far as possible, adopt any suggestions tending to lessen the risk of accident, this meeting is of opinion it is practically impossible to lay down any rigid rule applicable to all establishments alike, with respect to the keeping, selling and dispensing of poisons, and the enactment of such a law would seriously trammel and increase the responsibility of chemists and druggists without leading to greater safety on the part of the public."

Mr. HOLLINGSWORTH seconded the resolution, which was earnestly supported by Mr. A. SMITH, and carried.

Mr. SMITH moved—"That this meeting considers it would be an act of great injustice and severity to the chemists and druggists of England and Scotland should the proposed Regulations be enforced upon them, whilst surgeons, veterinary surgeons, and dispensaries are exempted, and would expose the public to greater danger from varying customs, than if no such unwise attempt been made."

This was seconded by Mr. CARLOW, supported by Mr. GALES, and carried unanimously.

Mr. EARLE proposed the following resolution:—"That this meeting deeply regrets that the Council of the Pharmaceutical Society had not decided to take the sense of the trade prior to the annual meeting, as suggested by Messrs. Woolley and Brown," which was seconded by Mr. AKESTER, and carried unanimously. It was also carried that assistance should be given to the Manchester Defence Association, and with a vote of thanks to the Chairman the meeting concluded.

NEWCASTLE-ON-TYNE.

A meeting of chemists and druggists was held in the lecture-room of the College of Medicine, Newcastle, on March 13th, Mr. J. W. SWAN in the chair. He objected to the imposition of arbitrary precautions, as such must necessarily be more slight than a careful chemist would voluntarily adopt. It appeared to him they have several courses to pursue in the matter. One was not to do anything at all; another was to support the Council in carrying out these compulsory Regulations. Another course was to recommend some modification of the Regulations; but if they wished to be left to themselves in the management of poisons, to use their own judgment, then the obvious course for them to pursue was to oppose the new Regulations.

Mr. BRADY explained the present position of the question as between the Privy Council, the Council of the Society and members; and reviewed some of the reasons which might be given against the enactment of the Regulations brought forward by the Council, condemning any increase to the present compulsory code as probably entirely unnecessary and certainly premature.

Mr. R. H. BROCKETT moved the following resolution, which was seconded by Mr. GLOVER, and carried unanimously:—"Considering the great diversity of arrangements necessary in different pharmaceutical establishments, this meeting thinks it impracticable to draw up any code of regulations for the keeping of poisons which it would be desirable to enforce alike in all."

Mr. R. ELLIOTT moved—"That it is not desirable to attempt any additions to the compulsory regulations for the keeping and selling of poisons already contained in the Pharmacy Act, till experience has shown that the latter do not afford all reasonable protection against errors on the part of pharmacists."

The resolution, having been seconded by Mr. WILKINSON, was carried unanimously.

Mr. B. S. PROCTOR said that remarks having fallen from Mr. Brady and other gentlemen that it might be desirable for the Council to submit a code of regulations which they could recommend for voluntary adoption wherever practicable, he would suggest that the addition of a label stating the dose was the most desirable addition to the name of the article, as a means of promoting an intelligent caution in the handling of dangerous drugs.

A general conversation ensued, after which it was moved by Mr. T. E. WATSON, seconded by Mr. J. C. RITSON, and carried unanimously,—

"That the following be suggested to the Council of the Pharmaceutical Society as a suitable basis for regulations to be recommended for voluntary adoption:—

"*In the keeping of Poisons.*

"1. That all poisons should be labelled with their name.

"2. That poisons which are used internally should also bear a label stating their usual adult dose.

"3. That poisons which are not used internally should bear a label with the words 'not for internal use.'

"*In the sale of Poisons.*

"4. That the above regulations should be observed in cases of ordinary sale, though not necessarily in dispensing."

Mr. GREENWELL, M.P.S., moved and Mr. ALFRED BRADY, M.P.S., seconded the following resolution—"That in the opinion of this meeting reporters should be admitted to the meetings of the Council of the Pharmaceutical Society, with the view of affording to the members of the Society fuller information respecting the management of its affairs."

NOTTINGHAM.

A general meeting of the chemists of the town and district, was held in the rooms of the Nottingham and Notts Chemists' Association, on Friday, March 10; Mr. J. H. ATHERTON, F.C.S., the President of the Society, in the chair. The meeting was well attended, and unanimous in its expression. The following resolutions were adopted:—

Proposed by Mr. W. H. PARKER, seconded by Mr. T. B. FLETCHER—"That in the opinion of this meeting, the proposed institution of compulsory Regulations for the keeping and dispensing of poisons is unwise, and an unnecessary interference with the freedom and independence of the trade."

Proposed by Mr. FITZ-HUGH, seconded by Mr. MAYFIELD—"That the importance of the proposed measure demands that the opinion of members of the Pharmaceutical Society should be taken, before the annual meeting in May. This meeting would urge the Council to issue with the voting papers, a form to be filled up by each member, requesting his opinion, 'Aye' or 'No,' on the subject, in order to ascertain definitely the views of the trade."

Proposed by Mr. BLANKNEY ARNOLD Seconded by Mr. F. WHITE—"That this meeting approves of the objects of the Defence Association, and hereby agrees to support its efforts."

Proposed by Mr. OAKLAND, seconded by Mr. LEWIS—"That the resolutions arrived at by this meeting be printed and circulated throughout the town and neighbourhood."

SUNDERLAND.

The annual meeting of the Chemists' Association was held at the rooms, 60, Fawcett-street, on the 3rd inst., the President, Alderman THOMPSON, J.P., in the chair. After the reading and adoption of the report, the following officers were elected for the ensuing year—President: Alderman Thompson. Vice-President: Harrison Thompson. Treasurer: R. Robinson. Secretary: J. J. Nicholson. Council: Messrs. John Harrison, D. B. Sharp, T. Naslett, H. Thompson, W. Bird, C. S. Lord, G. Cockburn, J. Ritson, F. T. Burns.

Mr. J. HARRISON moved the following resolution:—"That this Society, whilst deeply impressed with the necessity of the safety of the public being duly provided for in the keeping and dispensing of poisons and poisonous substances, is nevertheless of opinion that the higher position now held by the members of the trade is such as to enable them to make such arrangements for seconding this object as they in their discretion shall think fit, and strongly deprecates any further legislation on this subject. That a copy of this resolution be forwarded to the Secretary of the Pharmaceutical Society for presentation at the forthcoming annual meeting." Mr. Harrison contended that the day for restrictive legislation had passed away; and argued that the best security against accidents lay in the increased intelligence of the trade at large.

The resolution was seconded by Mr. SEDGWICK.

Mr. NICHOLSON moved an amendment, affirming that it was desirable to establish some uniform coloured label, such as red, to denote poisons. He urged that unless the Pharmaceutical Society made some suggestion to Government on the subject, more stringent regulations would probably be enforced.

This view of the case was also taken by Mr. SHARP, who seconded the amendment, and by the PRESIDENT, who supported it, but upon being put to the meeting it was lost by a considerable majority, and the original resolution carried.

Mr. J. Harrison then proposed:—"That this Society considering that as no person can now commence business as a chemist and druggist without being duly registered, and that when so registered is competent to discharge the same duties and incur the same responsibilities as a Pharmaceutical chemist, is of opinion that the exemption from service on juries now enjoyed by Pharmaceutical chemists only, ought to be extended to all registered chemists and druggists. That the Council of the Pharmaceutical Society be requested to take steps to secure this object."

The resolution was seconded by Mr. Hodgson, and supported by the President, who remarked that it was impossible to defend the exemption in the one case and not in the other, and called upon his Pharmaceutical brethren to support the resolution, which was then put and carried unanimously.

After a vote of thanks had been accorded to the officers for the past year, the meeting separated.

Notes and Queries

Preliminary Examination.—No; a knowledge of the art of writing poetry is not required by the examiners. They are satisfied with average English prose, and attention to grammatical construction.

Syrupus Ferri Lactatis.—*W. E. G.* will find the following formula given in "Beasley."

Take of Laetate of Iron ʒj.
Boiling distilled water ℥vj.
Sugar ℥xij.
Dose—ʒij. to ʒiv.

A good way of preparing it is by rubbing the lactate and a little of the sugar together in a mortar, putting the powder thus formed into a porcelain capsule with the six ounces of water. Apply heat, and stir the mixture until a clear solution is formed, then add the remaining sugar and continue the heat until all of the sugar is dissolved. Afterwards, filter and keep the syrup in well-corked phials.—C. T. I.

The pharmaceutical business is evidently one which cultivates the poetic faculty. It produced Keats and—the poet of the *Pharmaceutical Journal*. The following is the production of the latter genius. As might be expected, it is in blank verse—very blank.

"How doth the little C. and D.,
On poisons seek for voters;
And scatter stamps through all the trade,
In hopes of further orders."

A mass of rhyming rubbish has reached us, inspired by this. "Isaac Redivivus" sends about the worst, though we admit it does not reach the standard of badness which our contemporary has arrived at.

"How doth the little Ph. J.,
The fleeting hours employ?
In storing poisons day by day,
Its rival to destroy."

No, Isaac, we will forgive you, but our readers would not pardon us if we were to print the remaining thirteen verses.

OBITUARY.

MR. JOHN TUCK, M.P.S.

We regret to announce the death of this highly-respected member of our profession, which took place suddenly (after a few days' illness) on the 12th of March. 1871, at 114, St. Aldates-street, Oxford. Mr. Tuck was a pharmaceutical chemist (by examination), and a zealous worker in the cause of pharmacy. He became a life member of the Pharmaceutical Society in 1863. He was Local Secretary to the Pharmaceutical Society, and was also Local Secretary for the British Pharmaceutical Conference. He was the author of and contributed several very valuable papers to the Chemist and Druggist and *Pharmaceutical Journal*. The deceased gentleman's untimely death, at the early age of 32, is deeply felt by all with whom he was acquainted.

Correspondence

THE ADULTERATION BILL.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

Sir,—Thanks to the pressure from without, so materially and spiritedly assisted by you, the Poison Regulations may now be said, in the words of your talented correspondent, Mr. Ince, to be thrown to the winds of the four quarters of the globe, and the commanding premises in Bloomsbury need not at present be put up to public auction. The representatives of that firm, with the exception of one of their body, now no more, appear to have seen the error of their ways, and we congratulate them on having done so, as we may congratulate ourselves on the great victory we have achieved.

In apologetically announcing the above fact, the editor of the *Pharmaceutical Journal** makes a new and wonderful, but not scientific, discovery, viz., that the country members are powerful—and actually says, "We have now learnt to appreciate their power." Next, he patronizingly pats them on the back and urges them "not to neglect to exercise it in all matters which affect the advancement of the trade." And lastly, he winds up by dropping a pious tear or two over "departed worth" as the President is consigned to the tomb. *Requiescat in pace.*

But another and equally wonderful discovery remains to be made, viz., that the country chemists and druggists throughout the kingdom (not M.P.S.,) especially when backed by the Chemist and Druggist, are equally powerful. We must not, however, now repose on our oars because of this success; it should rather give us courage to be ever on the alert. We are continually in danger from "Privy (Council) conspiracy," from jealous medical men, from meddlesome M.P.'s (seeking notoriety), and from an ignorant public. A medical journal some time back, threatened us if we did not do as they desired, it would be done for us; and Mr. Muntz's Adulteration Bill, which has been twice read in the House of Commons, threatens us with dire pains and penalties if we should at any time have in our possession a drug otherwise than pure. What about bullets, shot, sand, etc., in opium-genuine, as imported? What about argol in senna leaves, sawdust in gum benzoin, dried blood in musk, and a thousand other *etceteras*. If we are to have purity these must be searched at the fountain. Drugs must be analysed before they are imported, and chemical manufactories must be under supervision, otherwise the evil will only be "skimmed and filmed over," "rank corruption" will remain, and still ranker injustice will be perpetrated.

Have you read, Mr. Editor, the milk-and-water article on this subject in the *Pharmaceutical Journal* of the 1st of April (All Fools' day!)? If not, pray do so. We are to wait for two or three convictions before doing anything—like the burning of two or three bishops in railway carriages—and then—we are to show our strength! Cannot you suggest something better than this? I have always been taught that "prevention is better than cure." Must we now regard this as a fallacy, and say with our milk-and-water friend, "Cure is better than prevention." Besides, we know that minor Acts of Parliament are often absolutely *smuggled* through the House, very frequently, too, under false names; and we all know how difficult it is to get an Act repealed which has once passed. What appears to me to be wanted is proper organisation. Could you not assist us in something of the sort? The formation, for instance, of a permanent "Defence Association," to watch for us and protect us against all such threatened evils as these? Pray, Mr. Editor, consider this matter, and if, through your instrumentality, such a thing could be brought about, you will add to your already many well-earned laurels, and merit the lasting esteem and gratitude of every one who, like myself, is

A Well-wisher to the Trade.

P.S. I enclose my card, and should be happy to subscribe for such a purpose.

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* *Vide Pharmaceutical Journal*, April 8.

THE MOTE AND THE BEAM.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—It must have been patent to those interested in the "Poison Regulation" controversy how few facts have been advanced by the disputants on either side in support of the views they hold. Unfortunately no official records of poisoning cases are kept, it is, therefore, almost impossible to get at more than an approximate estimate of the actual number of cases per annum. Those reported may, perhaps, be regarded as very nearly accurate, so far as regards the relative proportion of deaths caused by the negligence of chemists and others.

In order, if possible, to throw a little light upon the matter, I have carefully collected the cases reported in the *Pharmaceutical Journal* from 1865 to 1869 inclusive, with the following results:—In the year 1865, 27 cases of death by poison are reported: of these, 2 were caused by the negligence of chemists; 2 by surgeons; 1 by an herbalist; 1 by a grocer; 16 by the public; 5 were suicides. In the year 1866, 21 cases are reported: of these none were caused by the negligence of chemists; 2 by surgeons; 1 by a dispensing sergeant, military hospital: 15 by the public; 3 were suicides. In the year 1867, 11 cases are reported: of these none were caused by the negligence of chemists; none by surgeons; 1 by a huckster; 5 by the public; 5 were suicides. In the year 1868, 22 cases are reported: of these 3 were caused by the negligence of chemists; none by surgeons; 1 by a hospital dispenser; 2 by workhouse attendants; 1 by a quack; 12 by the public; 3 were suicides. In the year 1869, 22 cases are reported: of these 1 was caused by the negligence of a chemist; none by surgeons; 1 by an infirmary nurse; 13 by the public; 7 were suicides. So that, during the five years mentioned, there have been 103 cases, of which 6 have been caused by the carelessness of the chemist. We poison, in fact, 1·2 persons per annum.

Now, judging from the great importance attached by the Pharmaceutical and Privy Councils to the poison question, it might fairly be inferred that the number of cases of poisoning by chemists was something very alarming; but if the facts above cited are not very materially wide of the truth, the apparent indictment against us falls to the ground, and the whole matter looks more like a "storm in a teapot" than anything else.

Every man is presumed to be innocent until proved guilty. If the Pharmaceutical and Privy Councils can prove to us by the stern logic of facts that we are careless in the conduct of our business, and thus endanger the lives of our fellow-subjects, they will then, *and then only*, be in a position to condemn us, and with the condemnation award any amount of punishment in the shape of "regulations" they may think desirable. In the meantime, we plead "Not Guilty."

Keeping in mind for a moment this 1·2 cases per annum, let us see what is being done by others, *e.g.*, railway companies. A return has just been issued by the Board of Trade, from which it appears that during the year 1870, railway companies managed to kill 286 and wound 1,239 persons; and in the year 1869 the numbers were, 321 killed and 1,232 wounded. But no one proposes to place their instruments of destruction—very much more fatal than ours—under any sort of regulation, nor thinks of limiting the number of trains because a fatal accident occasionally happens. Then why impose any poison regulation? Why so much ado to save the *one* victim of Pharmacy, whilst the wholesale *slaughter of hundreds* of innocents goes on with remarkable regularity and precision, being regarded apparently as too trivial or common-place a matter to require the intervention of Government M.D.'s or chartered societies?

Yours, etc.,

Tere Bene.

BUSINESS.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—By this post I return the non-official voting-paper. Notwithstanding the remarks, editorial and otherwise, in last week's *Pharmaceutical Journal*, I think you are entitled to the gratitude of the trade at large for the spirited and handsome way—to say nothing of the expense—in which you are doing what I for one, as a member of the Pharmaceutical Society, conceive it to have been the duty of the Council to have done. If, at the same time, you seek to enlarge the number of your subscribers, I see nothing in that but what is just and honourable; and if you show yourself worthy of support by maintaining the interests of the great body of the trade, it certainly appears to me that the great body of the trade would be failing in their duty if they did not support you. It is for this reason that I beg to become a subscriber, although I could always see the paper without doing so.

Wm. Rogers.

Maidstone.

A FORGIVING SPIRIT.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

Sir,—It is exactly ten years since the present Lord Mayor of London presided at the London Coffee House, at an important meeting of chemists and druggists, who at that time were without any organization or power to resist oppressive measures becoming law, by which their liberty of action would be interfered with. That meeting, I cannot forget, had been brought about through the instrumentality and liberality of the proprietors of the Chemist and Druggist. On that occasion it was my privilege to move the following resolution:—"That the promoters of this Association feeling impressed with the fact that so numerous and intelligent a body as the chemists and druggists of the United Kingdom have no organization that fairly represent their interests, as a trading community, propose, that this Society be formed, and called the United Society of Chemists and Druggists."—Vol. II. fol. 69, Chemist and Druggist.

The formation of that Society had its origin in a desire to create a benevolent fund for the aged and infirm of our trade, and but for the jealousy and illwill of the pharmaceutic body, it would not have assumed the political attitude it was driven to adopt. I am led, Sir, to reflect upon what has been accomplished by the antagonism of the two parties in the strife, and to ask the question whether there is any comparison between the present time and ten years ago; and whether the present outcry against the Pharmaceutical Council calls for a similar remedy as was then instituted? When the outside trade first lifted its voice throughout the country, and protested against the arrogance of a Council, representing only 2,000 chemists, when they exposed the mockery of an assumed superiority of intellect and standing in society, no vituperation was great enough—no invective too severe for those who were stigmatized as "upstarts, and the scum of the trade." There was then no goodwill, but a strong feeling of opposition against all who did not hold the Bloomsbury certificate. But by degrees the prejudice was removed. The British Pharmaceutical Conference was born, and raised to strength by the efforts of the liberal element of the Square and the disinterested advocates of New Ormond-street. It was warmly supported by the Chemist and Druggist, and damned with faint praise by the Journal of the Pharmaceutists.

Happily, the annual gatherings of different sections produced a perfect understanding. The outsiders, no longer tainted with leprosy, were acknowledged to be as clean and well washed as the adherents of the "Bell" house. By their joint action, an Act of Parliament was obtained, which no longer leaves, in one sense, the resolution of 1861 applicable to the present time—"That so numerous and intelligent a body are without any representation." The entire trade can now have a voice in its government. It is represented in its legislative and trading interests by the Pharmaceutical Society. That which the reformers of 1861 aimed at has been accomplished. The Society is no longer the monopoly of a few, but the privilege of all who were in business at the passing of the Act; to others by virtue of their educational qualifications. It is true, the majority have not accepted the opportunity to exercise that vote which would place representative men on the board of management, and the consequence is, the old leaven is still working, and has attempted to aid the medical authorities in binding us all to poisons and other regulations. The effect has been to raise an union between all chemists. Members, and those who are not of the Society, have joined hands, and are agreed that compulsory regulations shall not be entertained, and at the last moment the Council bow to the strong current of opinion which threatened their equilibrium on the board. No longer is heard a word from the pharmaceutic tongue against the outsider. The generosity of examined members to "give up their privileges, which had cost time and money, for the benefit of the trade at large,"* was expressed by Mr. Vizer and others. Mr. Collins, who, as a pharmaceutist, "felt specially bound to regard the position of those who had no votes," is only one of many who would now put aside all distinction, and would rejoice to see the Society become the representative of the whole trade. With such cordiality, the time has certainly arrived for the outside trade to come in by thousands to take up their membership, and so by their votes place the men of their choice on the governing board. What need now of antagonistic societies? Why not all combine, and so, in making the trade secure, establish the Pharmaceutical Society as the real representative of the chemist?

In 1861, the chemist had no organization; now there is an authorised combination, which requires only to be accepted by the trade to prevent any such experiments being again attempted by the Council as that which has recently roused its members' indignation. If the gentle breath of the pharmaceutist has been enough to hurl a President from his seat, and to alter the views of eleven councillors, what would be the effect of the united voice of the whole trade? The outsider can now help himself, and should remember the admonition of Hercules to the waggoner, that if he wanted to get his cart out of the mud, he should put his own shoulder to the wheel, instead of expecting others to help him.

I am, Sir,
Yours obediently,

April 6, 1871. JOHN WADE.

Exchange Column.

THIS column is for the use of chemists and druggists who wish to obtain or dispose of surplus stock. It is intended to supply an opportunity for the transaction of that class of business which is generally described as "bargains." In order to pay expenses, a fee of one Halfpenny per word is charged, which must be paid in advance.

All correspondence respecting any of the articles mentioned above must be addressed to the Publisher of the CHEMIST AND DRUGGIST, Colonial-buildings, Cannon-street, London, and on the envelope must be distinctly marked the figures attached to the advertisement. In no case must the same letter refer to more than one advertisement. All letters will be forwarded by the publisher to their proper destinations, and with that his share in the transaction will cease.

FOR DISPOSAL.

Large Mortar. Gazogene. Galvanic Battery. 55/375.

Curley's Comaline. 18/ and 36/ per dozen nett. 50/375.

Homœpathic Pharmacopœia. 4/. 38/375.

Electric Bell, Battery and Wire. 63/375.

Medium-size Hewitt's Pulverising Machine, complete. 8/388.

Nearly New.—Water Mattress, 72 by 36. Weight 21 lbs. Offers Wanted. 7/388.

Pair of Small Window Globes, with Colours, in exchange for offers. 60/375.

Fine tall Cylindrical-cut Stoppered Show-bottle, from Paris Exhibition, for showing Oils, etc. Offers. 61/375.

Mahogany Stands, looking-glass backs, in exchange for Round-fronted Counter Case, or offers. 62/375.

Six volumes "Science Gossip," from commencement, 25/, or offers. 64/375.

A capital Camera, and necessary appliances, suitable for an amateur photographer. Only 50/. 20/375.

Offer wanted for Mahogany Circular Soda Water Stand, with Marble Top. In good condition. 48/375.

Pill and Ointment Jars and Shop Bottles. Second-hand. Cheap. 51/375.

Gig Harness, best quality, with brass mounts. Used one year by drug traveller. Cost £6 6s. Price £4. 52/375.

150 lbs. H. Hardwick's Glycerine Dip. In cans. At 4d. per lb. Carriage paid by rail. 34/375.

Succus Conii, B.P., for sale or exchange. Offers wanted. 21/375.

Duplicate Numbers of *Pharmaceutical Journal* for exchange or sale. List on application. 22/375.

For Sale, cheap.—Maw's, nearly new, Medicine Chest. 24 bottles. Cost 42/; will take 21/. 24/375.

About one cwt. of P. Sem. Cymini; will take 10d. per lb., or offers wanted. 6/388.

Pharmaceutical Journal. Vols. 1 to 6, inclusive. Unbound. 45/375.

Withering's "Botany." 4 vols., in boards. Last edition, 1832. Price 15s. 31/375.

Attfield's "Chemistry." 1st edition, new. 7/6. Huxley's "Physiology." Last edition. 4/6; take 3/6. Stowe's Toxicological Chart. 2/; take 1/. 32/375.

Handsome Gilt Embossed Door-panel. Crimson Ground. Lettered. Homœopathic Dispensing Department. Cost £6 6s. Offers wanted. 27/375.

Framed Photographic Enlargements, by a new process, produced from small portraits, in exchange for useful offers in drug trade. 19/375.

Cash Offers, wanted, for 150 lbs. (or less) of Condensed Milk Flour for Infants' Food. Same composition as Barral's. 58/375.

Apparatus, consisting of Still, Worm Tub, Thermometer, Hydrometer, etc., for finding the quantity of Alcohol in Wines, Tinctures, etc. Nearly new. 30/. 59/375.

A Pair of French Mill Stones, by Childs, of Hull. Diameter, 18½ in., thickness, 9 in. Have not been used. Price reasonable. 18/375.

Fawcett's Patent Definite Oil Measure for Paraffin and other Oils. Nearly new, and very accurate. Cistern holds about 5 gals. Cost 70/. Price 55/. 46/375.

The Phœnix, Carved in Wood, on Pedestal. Very suitable for shop front. Only requires re-gilding and painting. Price 40/. 47/375.

Halse's £10 10s. Galvanic Apparatus. Zinc plates half worn. Platinized silver plates destroyed, but will be replaced if purchaser desires. Coil as good as new. 41/375.

Offers wanted for 28 lbs. Cream Tartar, 28 lbs. P. Tartaric Acid, 1 cwt. bag Ground Alum, and £10 10s. Roller Pill Machine. Cash or exchange. 35/375.

A Chemical Balance and Weights, with a good selection of Apparatus and Chemicals. Full particulars on application. May be seen in London. 30/375.

Several handsome Specie Jars, cheap. A lot of Ridge's Food, at half price. Half-gallon Glass Percolator, one tube broken. 25/375.

About 20 gallons Raspberry Vinegar (prepared by the owner from last year's fruit) sample on application. About ½ cwt. Stavesacre Seeds. About ½ cwt. Cocculus Indicus. 1867 "British Pharmacopiœa," 8/6. 49/375.

Brooke's "Natural Philosophy." 5th edition. 12/6; post free, 6/6. Owen's "Conspectus." 2/6; post free, 1/8. Wittstein's "Pharmaceutical Chemistry." 6/; post free, 3/10. 33/375.

Galloway's "Second Steps in Chemistry." 10/. With Fowne's "Qualitative Analysis." 2/. Both new and uncut. In exchange either for Paxton's "Botanical Dictionary" or Lindley and Moore's "Treasury of Botany." Must be clean and complete. 17/375.

Owen's "Conspectus." Interleaved for Students' Notes. 23 2/6 copies, 1/3 each. Owen's "Conspectus." With Notes on Alkaloids, American Preparations, etc. 21 3/6 copies, 2/ each. Owen's Receipts, Aërated Mineral Waters, Continental Liqueurs, Fruit Syrups. 3/6; for 2/. 36/375.

Henry's "Chemistry," 2 vols, 5/. Hill's "Herbal," plates. 2/. Thompson's "London Dispensary," 7/6. Bell's "Anatomy," 3 vols, 6/. Burn's "Midwifery," 5/. Hooper's "Medical Dictionary," 5/. Watson's "Practice of Physic, 2 vols., 12/. Cooper's 1st Lines of "Surgery," 5/. 43/375.

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* Mr. Vizer's speech at the Freemasons' Tavern.

Forrest's Patent Measuring Apparatus (from ½ pint up to 2 gallons), and about 20 feet of inch Lead Pipe, with Taps and Drainer complete. Nearly new. Will take 30/. 23/375.

To be Sold Cheap.—Eleven Nested (Porcelain) Evaporating Pans. One Porcelain Pestle and Mortar (Small). One Small Bell-metal Pestle and Mortar. One Dozen Pill Machines, in good condition. Several gross of 3-oz. covered pots, Bust of Lord Palmerston in Parian Marble. One double-barrel of Anchovies. 44/375.

Two Tobacco and two Snuff Jars, gilt labels, crown pattern, and japanned covers. One upright Mahogany Counter Case, 26 in. high, 18 in. long, door to open behind, five shelves stained black inside, and lock and key. £1. Mahogany Counter Case, bent glass mirror back, door to fall down behind, 26 in. long, 14 in. high, 14 in. wide, 7 in. deep inside. 29/375.

A neat Mahogany Perfumery Stand, with twelve 2-oz. stoppered bottles, and mirrors behind bottles, and Gold-labelled Glass Tablet, 12/. Pereira's "Materia Medica," according to British Pharmacopœia, 15/, published at 21/. Miller's "Chemical Physics," "Inorganic Chemistry," "Organic Chemistry," 3 vols., 21/, published at 42/. Garrod's "Materia Medica," last edition, 8/6, published at 12/6. 40/375.

Two Specie Jars, 20 and 21 in. high, labelled Scroll and Phœnix patterns. (Maw's) 10/ Mahogany Flat Counter Case. Bell-metal Mortar, 7½ lbs. weight (Maw's). (Dr. Eguisier's) Irriegateur (perfect), cost 19/6. (As Fig. 18 in Maw's book.) 100 doz. (Silverlock's) Engraved Yellow Shop Bottle and Drawer labels, with painted borders; all large and middle size. (Silverlock's, price 1/6 per doz.) Any reasonable offer will be accepted for any of the above. 39/375.

WANTED.

Two Bentham's "Botany," send particulars directly. 26/375.

Second-hand Copper Still with worm complete. 28/375.

Twelve Shop Boxes; state size and condition. 37/375.

Twenty-five gallons Best Mushroom Catsup. 66/375.

Royle's "Materia Medica," and Babington's "British Botany." 3/388.

Wanted a Sheep-Dipping Tub, state price, size, and maker. 4/388.

A Machine or Mill suitable for mixing Baking Powder or Lemon Kali. 5/388.

A good half or gallon Tincture Press; state lowest price. 42/375.

Lescher's "Elements of Pharmacy," or Smith's "Pharmaceutical Guide." 53/375.

Fourth edition (perfect copy) Fresenius' "Quantitative Analysis; state lowest price. 54/375.

Laurie's "Homœopathic Guide." Beasley's "Receipt Book." 56/375.

Apparatus for a Druggist's Laboratory in good condition. 65/375.

Howard's Quinine, Fifty one-ounce bottles; state lowest cash price. 69/375.

Work on British Botany, as Hooker's, Bentham's, or Babington's; Chemical and other books likely to be useful in preparing for examination. State lowest price and condition. 57/375.

"Pharmacopœia Londinensis," Pereira's "Selecta e Prescriptis," 15th edition; Royle's "Materia Medica," 5th edition; Attfield's "Pharmaceutical Chemistry," 2nd edition; Bentley's "Botany," 2nd edition. State price and condition. 68/375.

We have received many letters from gentlemen using our Exchange Column, but we have not space to print their polite communications. In every case they remark that, as an opportunity for barter, it is a boon to the trade.

Bee Stings.—Mr. S. Lawrence Gill, Surgeon, Bow-road, kindly sends us the following:—Instantaneous ease is obtained by the application of washing soda—either solid or slightly moistened—to wasp and bee stings. I should not be surprised to find this remedy efficacious if immediately applied to snake-bites.

TRADE REPORT.

PUBLIC drug sales were held on Thursday last. Transactions were not extensive, but several articles commanded more attention, including Castor Oil, which sold at an occasional advance of ¼d. per lb. Musk sold firmly, except for low quality. Gum Assafœtida sold readily at higher prices. Gum Benjamin steady. Balsam Capivi quiet. Rhubarb and Honduras Sarsaparilla in less demand; prices about maintained. The following are a few further notes indicating the prices realised for the more common drugs offered at these sales:—

Aloes.—Of 178 packages East India 73 boxes Socotrine sold, good middling to good fair rather soft £8 5s. to £12 15s., rather ordinary to middling £5 to £7 10s. Of 40 cases Cape 20 cases sold, rather coarse and rather drossy to good hard 20s. to 24s. 6d. Of 177 boxes Curacoa 10 boxes fair partly rather coarse sold at 70s.

Assafœtida.—Of 134 cases 103 sold fine bold almond 100s., good 95s., dark and stony to fine block and pinky almond at 69s. to 90s., very ordinary partly siftings 50s., clean siftings 56s., very low 20s. to 20s. 6d.

Balsam.—1 tin Peru, balsam and bottoms sold at 7s. 10d. Of 12 barrels Capivi 1 cask good bright sold at 1s. 11d.

Bark.—75 packages middling Cascarilla rather woody sold at 24s. to 27s. Of 353 serons yellow 60 bales sold, good Quill 3s. 4d. to 3s. 5d. Of 38 bales Carthagena 5 bales good sold at 1s. 3d., the remainder bought in, sound at 1s. 5d. down to 8d. for inferior.

Cantharides.—2 casks Russian bought in at 5s.

Cardamoms being in good supply are only saleable at lower prices. 10 cases good Malabar were recently sold by private contract at 8s. 6d., and of 49 cases offered to-day 44 cases found buyers at a further decline, fine selected 8s. 8d. to 8s. 9d., mouldy 8s. 1d. to 8s. 2d., fine, rather small, and small 8s. 4d., good bold 8s. 1d. to 8s. 3d.

Galls.—117 sacks Turkey bought in at 60s., for green up to 90s., for good blue mixed with small white 45s.

Gum Copal.—Of 61 cases Manila 25 cases good fair hard medium to bold sold at 41s., and 10 cases chips and pieces dusty at 29s.

Honey.—14 barrels Chilian bought in at 42s. to 45s., and 1 cask Sydney at 38s.

Ipecacuanha.—39 serons Rio were bought in, sound at 5s. 6d., except 1 seron 1st class mouldy, which sold at 5s.

Oil, Cod Liver.—39 casks Newfoundland were either withdrawn or bought in, yellow to good fair at 4s. 9d. to 5s. 3d, and 92 casks Norwegian at 4s. 9d. to 5s. 6d.

Of 24 bottles Geranium 12 bottles sold at 10d.

Opium.—94 cases Turkey withdrawn or bought in at 16s. to 21s., except 2 cases sold at 16s. 6d. 30 cases Persian bought in at 23s.

Otto Roses.—11 cases bought in at 13s. to 20s. 400 ounces Dupsi mark withdrawn.

Rhubarb.—Of 179 cases 95 cases sold, middling to fair 1s. 5d. to 2s. 6d.

Sarsaparilla.—66 bales Jamaica sold fair, partly dark to good 2s. 6d. to 2s. 11d.

Scammony.—23 cases bought in at 14s. to 30s., or withdrawn.

Senna.—20 bales Alexandria, of fair colour, but rather broken leaf, mixed with a few pods, were bought in, sound at 4¼d.; 6 cases picked sold, partly broken and slightly stalky at 1s. 3d. 10 bales Tinnevelly damaged bought in at 3d.

The chemical trade is still very lively. Orders are booked for some months to come, and most of our large manufacturers are full. Mercury has given a little since last month, the metal being quoted at 15s. less per bottle, while the preparations are 1d. less all round. Bleaching Powder has gone up considerably, Continental orders having been very extensive. Cream of Tartar is cheaper, and Quinine shows a distinct tendency to decline.

Oils are very flat. Olive is nominally the same as last month, but there is no inquiry.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing-lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.]

CHEMICALS.

	1871.					1870.				
ACIDS—	s.	d.		s.	d.	s.	d.		s.	d.
Acetic ....per lb.	0	4	to	0	0	0	4	to	0	0
Citric ....per lb.	2	9	..	0	0	2	5	..	2	6
Hydrochlor. ....per cwt	4	0	..	7	0	4	0	..	7	0
Nitric ....per lb.	0	5	..	0	5½	0	5	..	0	5½
Oxalic .... ,,	0	9	..	0	0	0	7½	..	0	0
Sulphuric ...... ,,	0	0¾	..	0	1	0	0¾	..	0	1
Tartaric crystal .. ,,	1	4	..	1	4½	1	2½	..	0	0
powdered ,,	1	4½	..	0	0	1	2¾	..	0	0
Antimony ore......per ton	240	0	..	280	0	280	0	..	320	0
crude ..per cwt	36	0	..	38	0	36	0	..	0	0
regulus.. ,,	46	0	..	48	0	72	0	..	74	0
star .... ,,	48	0	..	50	0	75	0	..	0	0
Arsenic, lump...... ,,	15	6	..	16	0	16	0	..	16	6
powder.... ,,	6	9	..	7	3	7	3	..	7	6
Brimstone, rough ..per ton	160	0	..	0	0	160	0	..	0	0
roll ....per cwt	10	0	..	10	3	11	0	..	0	0
flour.... ,,	12	0	..	13	0	12	0	..	13	0
Iodine, dry ....per oz.	0	10½	..	0	0	0	9	..	0	9½
Ivory Black, dry..per cwt.	0	0	..	0	0	0	0	..	0	0
Magnesia, calcined..per lb.	1	1	..	0	0	1	2	..	0	0
Mercury........ per bottle	220	0	..	222	6	137	0	..	138	0
Minium, red ......per cwt.	20	0	..	21	0	20	9	..	21	0
orange .... ,,	31	6	..	0	0	31	6	..	32	6
Precipitate, red ....per lb.	3	8	..	0	0	2	6	..	0	0
white .. ,,	3	7	..	0	0	2	5	..	0	0
Prussian Blue ...... ,,	0	0	..	0	0	0	0	..	0	0
SALTS—										
Alum ....per ton	140	0	..	0	0	145	0	..	155	0
powder .... ,,	145	0	..	150	0	165	0	..	170	0
Ammonia:										
Carbonate ......per lb.	0	6	..	0	6½	0	5¾	..	0	6
Hydrochlorate, crude, white........ per ton	440	0	..	540	0	480	0	..	560	0
British (*see* Sal Ammoniac)										
Sulphate ......per ton	360	0	..	370	0	320	0	..	330	0
Argol, Cape ......per cwt	50	0	..	70	0	50	0	..	65	0
France .... ,,	0	0	..	0	0	40	0	..	50	0
Oporto, red ,,	22	0	..	24	0	22	0	..	24	0
Sicily .... ,,	0	0	..	0	0	32	0	..	40	0
Naples, white ,,	0	0	..	0	0	0	0	..	0	0
Florence, white	0	0	..	0	0	0	0	..	0	0
,, red ,,	0	0	..	0	0	0	0	..	0	0
Ashes (*see* Potash and Soda)										
Bleaching powd..per cwt.	14	0	..	0	0	9	3	..	9	6
Borax, crude .... ,,	25	0	..	40	0	25	0	..	35	0
(Tincal) .. ,,	45	0	..	60	0	50	0	..	62	0
British refnd. ,,	68	0	..	70	0	63	0	..	70	0
Calomel ....per lb.	3	6	..	0	0	2	5	..	0	0
Copper:										
Sulphate ......per cwt.	22	6	..	25	0	23	6	..	24	0
Copperas, green ..per ton	50	0	..	60	0	52	6	..	60	0
Corrosive Sublimate..p.lb.	2	10	..	0	0	1	11	..	0	0
Cr. Tartar, French, p. cwt.	97	6	..	100	0	33	0	..	84	0
Venetian grey ,,	100	0	..	0	0	83	0	..	0	0
brown ,,	0	0	..	0	0	0	0	..	0	0
Epsom Salts ....per cwt.	6	0	..	7	0	6	0	..	7	0
Glauber Salts .... ,,	4	6	..	6	0	4	6	..	6	0
Lime:										
Acetate, white, per cwt.	12	6	..	23	0	12	6	..	23	0
Magnesia: Carbonate ,,	42	6	..	0	0	42	6	..	0	0
Potash:										
Bichromate ....per lb.	0	5	..	0	5¼	0	5⅜	..	0	5¾
Carbonate:										
Potashes, Canada, 1st sort ......per cwt.	32	9	..	0	0	32	0	..	0	0
Pearlashes, Canada, 1st sort ......per cwt.	40	0	..	0	0	34	0	..	0	0
Chlorate ....per lb.	1	1½	..	0	0	0	10	..	0	0
Prussiate ...... per lb.	1	0½	..	1	1	1	0	..	0	0
red .... ,,	1	9½	..	1	10	1	9½	..	1	10
Tartrate (*see* Argol and Cream of Tartar)										
Potassium:										
Chloride ......per cwt.	12	6	..	13	0	8	0	..	0	0
Iodide.......... per lb.	14	6	..	15	0	11	6	..	12	0
Quinine:										
Sulphate, British, in bottles ...... per oz.	7	3	..	7	6	5	10	..	6	0
Sulphate, French ,,	7	2	..	7	3	5	7	..	5	8
Sal Acetos ....per lb.	0	11½	..	0	0	0	10	..	0	0
Sal Ammoniac, Brit. cwt.	41	0	..	42	0	41	0	..	42	0
Saltpetre:										
Bengal, 6 per cent or under ......per cwt.	25	9	..	26	6	24	6	..	25	0
Bengal, over 6 per cent. per cwt.	25	0	..	25	6	22	6	..	24	0
Madras........ ,,	0	0	..	0	0	21	9	..	22	0
Bomb. & Kurrachee p.ct.	0	0	..	0	0	0	0	..	0	0
European...... ,,	0	0	..	0	0	25	0	..	26	0
British, refined ,,	30	6	..	31	0	27	0	..	27	6
Soda: Bicarbonate, p.cwt.	11	3	..	0	0	10	0	..	0	0
Carbonate:										
Soda Ash.... perdeg.	0	2	..	0	2⅛	0	1¾	..	0	0
Soda Crystals per ton	97	6	..	0	0	85	0	..	90	0
Hyposulphite..per cwt.	18	0	..	0	0	13	6	..	14	0
Soda:										
Nitrate ....per cwt.	16	0	to	16	6	17	0	to	13	0
Sugar of Lead, White, cwt.	39	0	..	40	0	39	0	..	40	0
Brown .... ,,	26	0	..	28	0	26	0	..	23	0
Sulphur (*see* Brimstone										
Verdigris .... per b.	1	0	..	1	2	1	0	..	1	2
Vermilion, English..per lb.	3	8	..	3	10	2	4	..	2	6
China.... ,,	3	6	..	0	0	3	0	..	3	1

DRUGS.

	1871.					1870.				
	s.	d.		s.	d.	s.	d.		s.	d.
Aloes, Hepatic....per cwt.	70	0	..	210	0	60	0	..	160	0
Socotrine .. ,,	120	0	..	325	0	100	0	..	220	0
Cape, good.. ,,	23	0	..	23	0	26	0	..	28	6
Inferior ,,	17	6	..	22	0	17	0	..	25	0
Barbadoes ,,	70	0	..	200	0	80	0	..	220	0
Ambergris, grey........ oz.	25	0	..	28	0	25	0	..	28	0
BALSAMS—										
Canada .... per lb.	0	10	..	0	11	0	10½	..	1	0
Capivi .... ,,	1	9	..	1	10	1	9	..	1	11
Peru .... ,,	9	2	..	0	0	7	8	..	7	10
Tolu .... ,,	1	10	..	1	11	2	6	..	2	8
BARKS—										
Canella alba ....per cwt.	15	0	..	25	0	20	0	..	34	0
Cascarilla........ ,,	18	0	..	32	0	22	0	..	34	0
Peru, crown & grey per lb.	0	10	..	2	6	0	10	..	2	4
Calisaya, flat ,,	3	2	..	3	6	3	6	..	3	8
quill ,,	3	2	..	3	6	3	6	..	3	7
Carthagena ,,	0	10	..	1	10	1	0	..	1	9
Pitayo .... ,,	0	10	..	1	6	0	4	..	1	6
Red .... ,,	2	0	..	7	0	1	6	..	7	0
Bucho Leaves ...... ,,	0	5	..	0	9	0	3	..	0	6
Camphor, China.. per cwt.	70	0	..	0	0	87	6	..	90	0
Japan ,,	72	6	..	9	0	90	0	..	92	6
Refin Eng. per lb.	1	2	..	1	3	1	3	..	0	0
Cantharides ...... ,,	5	3	..	0	0	4	0	..	0	0
Chamomile Flowers p. cwt	40	0	..	65	0	40	0	..	72	6
Castoreum .... per lb.	3	0	..	30	0	4	0	..	32	0
Dragon's Blood, lp. p. cwt.	100	0	..	210	0	90	0	..	200	0
FRUITS AND SEEDS (*see also* Seeds *and* Spices)										
Anise, China Star pr cwt.	110	0	..	115	0	120	6	..	130	0
German, &c. ,,	48	0	..	50	0	28	0	..	40	0
Beans, Tonquin .. per lb.	0	9	..	1	6	1	0	..	1	6
Cardamoms, Malabar good ,,	8	0	..	8	9	8	0	..	8	11
inferior ,,	6	0	..	7	6	6	6	..	7	9
Madras ,,	5	6	..	8	6	5	0	..	8	6
Ceylon ,,	2	9	..	3	0	2	6	..	2	10
Cassia Fistula.. per cwt.	12	0	..	30	0	16	0	..	35	0
Castor Seeds .. ,,	10	0	..	12	0	10	6	..	12	0
Cocculus Indicus ,,	12	6	..	13	6	19	0	..	21	0
Colocynth, apple.. per lb.	0	3	..	0	6	0	4¾	..	0	8
Croton Seeds .. per cwt.	80	0	..	87	0	46	0	..	55	0
Cubebs .... ,,	25	0	..	27	6	27	6	..	32	6
Cummin........ ,,	90	0	..	100	0	100	0	..	110	0
Dividivi .... ,,	12	0	..	13	0	12	6	..	14	0
Fenugreek...... ,,	15	0	..	20	0	13	0	..	15	0
Guinea Grains .. ,,	23	0	..	24	0	31	6	..	34	0
Juniper Berries ,,	15	0	..	15	6	7	6	..	8	6
Myrobalans .... ,,	10	0	..	15	6	8	0	..	16	0
Nux Vomica.... ,,	10	6	..	13	0	10	0	..	14	0
Tamarinds, East India ,,	8	0	..	12	0	10	0	..	16	0
West India, new ,,	8	0	..	14	0	10	6	..	20	0
Vanilla, large .... per lb.	30	0	..	42	6	24	0	..	32	
inferior ,,	15	0	..	27	0	12	0	..	22	0
Wormseed per cwt.	0	0	..	0	0	35	0	..	0	0
Ginger, Preserved, in bond (duty 1d. per lb.) perlb.	0	6	..	0	8	0	6	..	0	
Gums (*see separate list*)										
Honey, Chili .... per cwt.	36	0	..	46	0	30	0	..	47	
Cuba .... ,,	22	0	..	36	0	22	0	..	36	0
Jamaica.. ,,	31	0	..	52	0	31	0	..	55	0
Ipecacuanha .... per lb.	5	2	..	5	3	6	9	..	7	0
Isinglass, Brazil.. ,,	2	10	..	4	6	2	11	..	4	5
Tongue sort ,,	3	8	..	5	1	3	2	..	4	9
East India ,,	1	7	..	4	0	1	10	..	3	11
West India ,,	3	10	..	4	4	4	0	..	4	6
Russ. long staple	5	6	..	8	0	5	0	..	8	0
,, leaf ,,	3	0	..	5	6	3	0	..	5	0
,, Simovia	2	0	..	3	6	1	6	..	2	6
Jalap, good ...... ,,	1	9	..	3	2	2	8	..	3	4
infer. & stems ,,	0	6	..	1	7	0	6	..	2	7
Lemon Juice ... per degree	0	1	..	0	1⅛	0	1	..	0	1⅛
Liquorice, Spanish per cwt.	0	0	..	0	0	60	0	..	65	0
Italian ,,	40	0	..	60	0	48	0	..	63	0
Manna, flaky .... per lb.	3	6	..	4	0	3	0	..	3	6
small...... ,,	2	0	..	2	2	1	6	..	1	9
Musk.............. per oz.	21	0	..	37	6	13	0	..	34	0
OILS (*see also separate List*)										
Almond, expressed per lb.	1	1	..	0	0	1	0	..	0	0
Castor, 1st pale .... ,,	0	4¾	..	0	5	0	4¾	..	0	5
second .... ,,	0	4½	..	0	4⅝	0	4¼	..	0	4½
infer. & dark ,,	0	4	..	0	4¼	0	4¼	..	0	0
Bombay (in casks)	0	4	..	0	4½	0	4	..	0	0
Cod Liver ......per gall.	5	0	..	6	0	5	0	..	6	3
Croton............per oz.	0	3½	..	0	4½	0	3	..	0	4
Essential Oils:										
Almond ....per lb.	42	0	..	0	0	42	0	..	0	0
Anise-seed ...... per lb.	9	0	..	0	0	8	8	..	0	0
Bay ....per cwt.	65	0	..	70	0	65	0	..	70	0
Bergamot ......per lb.	8	0	..	15	0	8	0	..	14	0
Cajeput, (in bond) per oz.	0	2½	..	0	3	0	1¾	..	0	2
Caraway ....per lb.	5	6	..	6	3	5	6	..	6	3
Cassia .... ,,	4	6	..	4	7	4	7	..	4	9
Cinnamon ......per oz.	1	0	..	4	6	1	0	..	4	6
Cinnamon-leaf .. ,,	0	2	..	0	6	0	4	..	0	0

	1871.				1870.			
Essential Oils, *continued:—*	s.	d.	s.	d.	s.	d.	s.	d.
Citronelle ......per oz.	0	2	0	2½	0	2½	0	2
fine.... ,,	0	2¼	0	0	0	3	0	0
Clove............per lb.	2	5	0	0	2	7	0	0
Juniper .... ,,	1	9	2	0	1	9	2	0
Lavender........ ,,	3	0	4	3	3	0	4	3
Lemon.......... ,	5	0	9	6	5	0	7	0
Lemongrass ....per oz.	0	2¾	0	3	0	3¾	0	4½
Neroli .... ,,	0	5	0	6	0	5	0	6
Nutmeg .... ,,	0	4	0	7½	0	5	0	10
Orange..........per lb.	5	0	7	0	5	0	7	0
Otto of Roses....per oz.	12	0	20	0	13	0	20	0
Patchouli ...... ,,	3	0	0	0	6	0	0	0
Peppermint:								
American ....per lb.	15	6	17	0	14	0	15	6
English ...... ,,	83	0	34	0	32	0	42	0
Rosemary ...... ,,	1	9	2	0	1	9	2	0
Sassafras........ ,,	3	0	0	0	4	0	4	6
Spearmint ...... ,,	4	0	16	0	4	0	16	0
Thyme.......... ,,	1	10	2	0	1	10	2	0
Mace, expressed .. per oz.	0	1½	0	3	0	1	0	2½
OPIUM, Turkey ...... per lb.	28	0	30	0	36	0	38	0
inferior ...... ,,	16	0	27	0	25	0	35	0
QUASSIA (bitter wood) per ton	60	0	70	0	140	0	150	0
RHUBARB, China, good and fine ....per lb.	2	0	6	0	4	6	8	0
Good, mid. to ord. ,,	0	3	1	9	0	8	4	3
Dutch trimmed ,,	0	0	0	0	9	6	10	0
Russian .... ,,	0	0	0	0	0	0	0	0
ROOTS—Calumba..per cwt.	25	0	42	0	30	0	35	0
China .... ,,	25	0	28	0	35	0	40	0
Galangal .... ,,	15	0	17	0	17	0	22	0
Gentian .... ,,	23	0	0	0	19	0	0	0
Hellebore ...... ,,	22	0	30	0	22	0	30	0
Orris............ ,,	65	0	68	0	50	0	52	0
Pellitory .... ,,	53	0	60	0	58	0	60	0
Pink..............per lb.	0	7	1	0	0	7	0	10
Rhatany.......... ,,	0	5	0	11	0	5	0	10
Senega............ ,,	4	9	5	0	1	9	0	0
Snake .... ,,	0	11	1	0	1	0	0	0
SAFFRON, Spanish .. ,,	35	0	44	0	34	0	38	0
SALEP ....per cwt.	110	0	0	0	110	0	0	0
SARSAPARILLA, Lima per lb.	0	6	0	7½	0	0	0	7
Para.............. ,,	1	0	1	3	1	0	1	3
Honduras .... ,,	1	1	1	8	1	2	1	6
Jamaica .... ,,	1	7	3	2	1	11	2	6
SASSAFRAS ....per cwt.	0	0	0	0	0	0	0	0
SCAMMONY, Virgin ..per lb.	25	0	29	0	28	0	32	0
second & ordinary ,,	10	0	23	0	10	0	23	0
SENNA, Bombay .... ,,	0	3½	0	5½	0	3½	0	6
Tinnivelly .... ,,	0	4	1	6	0	3	1	4
Alexandria........ ,,	0	4	1	7	0	4½	1	7
SPERMACETI, refined.. ,,	1	6	1	7	1	6	1	7
American .... ,,	1	3	1	4	1	6	0	0
SQUILL.............. ,,	0	1	0	2	0	1	0	2¼

GUMS.

	1871.				1870.			
	s.	d.	s.	d.	s.	d.	s.	d.
AMMONIACI drop ..per cwt.	80	0	100	0	210	0	270	0
lump .. ,,	50	0	75	0	120	0	200	0
ANIMI, fine washed ,,	250	0	320	0	300	0	340	0
bold scraped ,,	200	0	240	0	240	0	290	0
sorts ...... ,,	100	0	200	0	100	0	200	0
dark ...... ,,	70	0	100	0	80	0	100	0
ARABIC, E. I., fine pale picked .. ,,	65	0	72	0	76	0	82	0
srts, gd. to fin ,,	55	0	65	0	65	0	74	0
garblings.. ,,	25	0	47	0	40	0	60	0
TURKEY, pick. gd to fin. ,,	160	0	200	0	170	0	210	0
second & inf. ,,	85	0	155	0	90	0	160	0
in sorts .. ,,	70	0	90	0	75	0	100	0
Gedda.... ,,	38	0	44	0	38	0	44	0
BARBARY, white .. ,,	65	0	70	0	75	0	80	0
brown .. ,,	48	0	50	0	70	0	75	0
AUSTRALIAN ...... ,,	22	0	42	0	25	0	47	0
ASSAFŒTIDA, com. to gd ,,	30	0	90	0	40	0	100	0
BENJAMIN, 1st qual. ,,	160	0	400	0	280	0	460	0
2nd ,, ,,	150	0	210	0	140	0	220	0
3rd ,, ,,	40	0	85	0	60	0	120	0
COPAL, Angola red ,,	120	0	140	0	95	0	107	6
Benguela .. ,,	90	0	95	0	90	0	105	0
Sierra Leone..per lb.	0	2½	1	0	0	3¾	1	2½
Manilla ....per cwt.	16	6	42	6	32	0	55	0
DAMMAR, pale .... ,,	60	0	61	0	77	6	85	0
EUPHORBIUM ...... ,,	13	0	14	0	13	0	14	0
GALBANUM .... ,,	200	0	260	0	160	0	260	0
GAMBOGE, pckd. pipe ,,	260	0	300	0	290	0	230	0
GUAIACUM ....per lb.	0	9	2	7	0	9	1	6
KINO..............per cwt.	60	0	120	0	60	0	140	0
KOWRIE, rough.... ,,	25	0	36	0	50	0	57	6
scraped .. ,,	38	0	90	0	58	0	105	0
MASTIC, picked......per lb.	6	0	7	0	5	0	6	0
MYRRH, gd. & fine per cwt.	120	0	160	0	190	0	233	0
sorts......	80	0	115	0	95	0	185	0
OLIBANUM, p. sorts	75	0	80	0	78	0	85	0
amber & ylw.	67	6	74	0	70	0	77	0
garblings .... ,,	19	6	44	0	25	0	50	0
SENEGAL ....per cwt.	65	0	85	0	80	0	95	0
SANDARAC .... ,,	55	0	111	0	70	0	100	0
THUS.............. ,,	20	0	25	0	13	0	14	0
TRAGACANTH, leaf.. ,,	200	0	300	0	220	0	380	0
in sorts ,,	110	0	180	0	115	0	210	0

OILS.

	1871.				1870.			
SEAL, pale..........per tun	£37	10	0	0	£43	0	0	0
yellow to tinged ,,	33	0	36	0	36	0	41	0
brown........ ,,	31	0	0	0	34	0	35	0
SPERM, body ..... ,,	83	0	84	0	90		91	0
headmatter ,,	84	0	0	0	90	0	0	0

	1871.				1870.			
Oils, *continued :—*	£	s.	£	s.	£	s.	£	s.
COD.................. per tun	35	0	35	10	38	10	39	0
WHALE, South Sea, pale ,,	36	0	37	10	39	0	0	0
yellow ,,	35	0	0	0	37	0	38	0
brown ,,	33	0	0	0	36	0	0	0
East India, Fish ,,	28	0	29	0	32	0	33	0
OLIVE, Galipoli ...... ,,	49	0	0	0	60	0	0	0
Trieste ...... ,,	48	0	0	0	59	0	0	0
Levant ...... ,,	48	0	0	0	54	0	55	0
Mogador...... ,,	48	0	0	0	53	0	0	0
Spanish ...... ,,	48	0	43	0	58	0	0	0
Sicily .... ,,	47	10	48	10	57	0	58	0
COCOANUT, Cochin.. per ton	48	0	48	0	46	0	0	0
Ceylon .. ,,	40	0	40	10	42	0	0	0
Sydney ,,	32	0	37	10	35	0	41	0
GROUND NUT AND GINGELLY :								
Bombay	0	0	0	0	0	0	0	0
Madras................	43	0	44	0	42	10	0	0
PALM, fine	38	0	0	0	40	10	0	0
LINSEED	32	0	0	0	32	10	0	0
RAPESEED, English, pale ..	45	10	0	0	44	0	0	0
brown........	43	10	0	0	41	10	0	0
Foreign pale....	48	0	0	0	45	10	46	0
brown........	43	10	0	0	42	0	0	0
COTTONSEED	27	10	33	0	31	0	37	0
LARD......................	68	0	69	0	76	0	0	0
TALLOW	36	0	0	0	35	0	0	0
TURPENTINE, American, cks.	36	6	0	0	30	6	0	0
PETROLEUM, Crude	0	0	0	0	14	0	0	0
	s.	d.	s.	d.	s.	d.	s.	d.
refined, per gall.	1	5	1	5½	1	9½	1	10
Spirit ,,	0	11	1	0	1	4	1	6

SEEDS.

	1871.				1870.			
	s.	d.	s.	d.	s.	d.	s.	d.
CANARY ....per qr.	46	0	54	0	50	0	60	0
CARAWAY, English per cwt.	0	0	0	0	48	0	52	0
German, &c.....	0	0	0	0	28	0	46	0
CORIANDER	0	0	0	0	20	0	22	0
HEMP ....per qr.	44	0	48	0	40	0	43	0
LINSEED, English per qr...	0	0	0	6	0	0	0	0
Black Sea & Azof	63	6	0	0	57	0	0	0
Calcutta ,,	62	0	62	6	59	0	0	0
Bombay ,,	63	6	0	0	60	0	0	0
St. Petrsbrg. ,,	59	0	60	0	54	0	56	0
Mustard, brown..per bshl.	0	0	0	0	8	0	10	6
white.. ,,	9	0	9	6	7	0	14	0
POPPY, East India per qr.	60	6	61	0	57	0	0	0

SPICES.

	1871.				1870.			
	s.	d.	s.	d.	s.	d.	s.	d.
CASSIA LIGNEA ....per cwt.	98	0	112	0	120	0	130	0
Vera .... ,,	45	0	80	0	47	0	83	0
Buds .... ,,	140	0	170	0	160	0	175	0
CINNAMON, Ceylon,								
1st quality ....per lb.	2	2	3	5	1	10	3	7
2nd do. ...... ,,	1	8	3	4	1	7	3	4
3rd do. ...... ,,	1	7	3	2	1	3	3	1
Tellicberry ...... ,,	0	0	6	0	0	0	0	0¾
CLOVES, Penang.... ,,	1	1	1	2	0	10¾	1	0
Amboyna........ ,,	0	4¾	0	6¼	0	4½	0	5
Zanzibar .... ,,	0	3	0	3	0	3	0	0
GINGER, Jam., fine per cwt.	80	0	180	0	110	0	200	0
Ord. to good .. ,,	33	0	77	0	36	0	100	0
African.......... ,,	30	0	0	0	26	0	0	0
Bengal .... ,,	25	0	0	0	26	0	0	0
Malabar .... ,,	0	0	0	0	26	0	28	0
Cochin .... ,,	34	0	105	0	35	0	110	0
PEPPER, Blk, Malabar, per lb.	0	6	0	6½	0	5½	0	6
White, Tellicberry ,,	0	9½	1	2½	0	9	1	5
Cayenne .... ,,	0	8½	1	4½	0	9	1	2½
MACE, 1st quality ..per lb.	3	3	3	10	3	0	3	9
2nd and inferior.. ,,	2	5	3	2	2	4	2	11
NUTMEGS, 78 to 60 to lb.	2	7	4	0	2	8	4	0
90 to 80 ,,	2	4	2	6	2	2	2	7
132 to 95 ,,	1	8	2	3	1	6	2	1

VARIOUS PRODUCTS.

	1871.				1870.			
COCHINEAL—								
Honduras, black ..per lb.	2	5	3	6	2	8	3	10
,, silver .. ,,	2	5	2	9	2	9	2	11
,, pasty .. ,,	1	10	2	4	2	1	2	8
Mexican, black .... ,,	2	5	2	9	2	8	3	0
,, silver .... ,,	2	4	2	5	2	7	2	8
Teneriffe, black....	2	5	3	9	2	9	4	0
,, silver.... ,,	2	4	2	6	2	8	2	9
PUMICE STONE ..per ton	120	0	150	0	120	0	160	0
SOAP, Castile ....per cwt.	35	0	0	0	35	0	0	0
SPONGE, Turk. fin pkd pr lb.	12	0	16	0	12	0	16	0
Fair to good .. ,,	4	0	11	0	4	0	11	0
Ordinary...... ,,	1	0	3	6	1	0	3	6
Bahama............ ..	0	6	2	6	0	6	2	6
TERRA JAPONICA—								
Gambier .. per cwt.	15	3	15	6	17	3	17	6
Free cubes ,,	17	0	19	0	13	6	21	0
Cutch ..... ,,	19	6	22	0	25	0	26	6
WOOD, DYE, Bar ..per ton	£3	15	£4	0	£4	0	£4	10
Brazil .... ,,	0	0	0	0	0	0	0	0
Braziletto .... ,,	0	0	0	0	0	0	0	0
Cam .... ,,	17	0	24	0	17	0	24	0
Fustic, Cuba...... ,,	7	10	8	10	7	15	8	10
Jamaica .... ,,	5	10	5	10	4	10	5	10
Savanilla........ ,,	0	0	0	0	0	0	0	0
LOGWOOD, Campeachy ,,	9	10	10	0	9	10	10	10
Honduras ...... ,,	5	10	6	10	5	10	5	15
St. Domingo .... ,,	4	10	6	10	5	0	5	10
Jamaica .... ,,	4	5	4	12/6	4	15	0	0
LIMA, first pile.... ,,	9	10	10	10	11	15	0	0
RED SANDERS...... ,,	5	5	5	5	8	5	8	10
SAPAN, BIMAS, &c. ,,	6	0	8	10	7	0	9	10